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PART IV

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REBUTTABLE PRESUMPTION AGAINST REGISTRATION AND CONTINUED REGISTRATION OF PESTICIDE PRODUCTS CONTAINING LINDANE

ENVIRONMENTAL PROTECTION AGENCY

[FRL-687-8; OPP-30000/10]

PESTICIDE PROGRAMS

Notice of Rebuttable Presumption Against Registration and Continued Registration of Pesticide Products Containing Lindane

The Deputy Assistant Administrator, Office of Pesticide Programs, Environmental Protection Agency (EPA), has determined that a rebuttable presumption exists against registration and continued registration of all pesticide products containing lindane.[1, 2]

I. Regulatory Provisions

A. *General.* EPA promulgated regulations (40 CFR Part 162) for the registration, reregistration, and classification of pesticides on July 3, 1975 (40 FR 28242). Section 162.11 of the regulations provides that a rebuttable presumption against registration shall arise if it is determined that a pesticide meets or exceeds any of the criteria for risk set forth in § 162.11(a)(3). If it is determined that such a persumption against continued registration of a pesticide has arisen, the regulations require that the registrant be notified by certified mail and that the registrant be provided with an opportunity to submit evidence in rebuttal of the presumption. In addition, the Agency has determined that the public should be provided with notice of the presumption in order to solicit comments from interested parties and obtain any additional information relevant to the presumption.

A notice of rebuttable presumption against registration or continued registration of a pesticide is not to be confused with a notice of intent to cancel the registration of a pesticide, and may or may not lead to cancellation. The notice of rebuttable presumption is issued when the evidence related to risk meets the Agency's criteria. The notice of intent to cancel is issued only after the risks and benefits of a pesticide are carefully considered and it is determined that the pesticide may generally cause unreasonable adverse effects to the environment.

Accordingly, all registrants and applicants for registration are invited pursuant to 40 CFR 162.11(a)(4) to submit evidence in rebuttal of the presumptions listed in Part II and, in the case of oncogenicity, to submit information which relates to the assessment of oncogenic risks as set forth in the Interim Procedures and Guidelines for Health Risk and Economic Impact Assessment of Suspected Carcinogens (May 25, 1976; 41 FR 21402). Registrants and other interested parties may submit data on benefits which they believe would justify registration or continued registration in the event that the Agency determines that the risk presumptions have not been completely rebutted. In addition, any registrant may petition the Agency to voluntarily cancel any current registration pursuant to Section 6(a)(1) of FIFRA.

This notice of rebuttable presumption against lindane also describes scsientific studies which suggest that lindane may adversely affect avian wildlife, and includes a summary of medical case reports which indicate that lindane may produce hemotoxic effects in humans. The Agency is soliciting information and comment on these questions and is requiring each registrant to provide data relating to dermal and inhalation toxicity, but it is not now presuming against lindane on these bases.

B. *Rebuttal criteria.* Section 162.11(a)(4) provides that a registrant seeking continued registration may rebut the presumption by sustaining the burden of proving:

(1) In the case of a pesticide presumed against pursuant to the acute toxicity criteria of § 162.11(a)(3)(i) or pursuant to the lack of emergency treatment criteria of § 162.11(a)(3)(iii), "that when considered with the formulation, packaging, method of use, and proposed restrictions on and directions for use and widespread and commonly recognized practices of use, the anticipated exposure to an applicator or user and to local, regional or national populations of nontarget organisms is not likely to result in any significant acute adverse effects";

(2) In the case of a pesticide presumed against pursuant to the chronic toxicity criteria of § 162.11(a)(3)(ii), "that when considered with proposed restrictions on use and widespread and commonly recognized practices of use, the pesticide will not concentrate, persist or accrue to levels in man or the environment likely to result in any significant chronic adverse effects"; or

(3) In either case, that "the determination by the Agency that the pesticide meets or exceeds any of the criteria for risk was in error."

C. *Benefits information.* In addition to submitting evidence to rebut the presumption of risk, § 162.11(a)(5)(iii) provides that a registrant "may submit evidence as to whether the economic, social and environmental benefits of the use of the pesticide subject to the presumption outweigh the risk of use." If the risk presumptions are not rebutted, the benefit evidence submitted by the registrant[3] and any preliminary EPA staff recomemndations may be considered by the Administrator in determining the appropriate regulatory action. Specifically, § 162.11(a)(5)(iii) provides that if the "benefits appear to outweigh risks," the Administrator may issue a notice of intent to hold a hearing pursuant to Section 6(b)(2) of FIFRA rather than a notice of intent to cancel or deny registration pursuant to Section 6(b)(1) of FIFRA. Alternatively, if the "benefits do not appear to outweigh the risks, the Administrator shall issue a notice pursuant to Section 3(c)(6) or Section 6(b)(1) of the Act, as appropriate." Moreover, if at any time the Administrator determines that a pesticide poses an "imminent hazard" to humans or the environment, a notice of suspension may be issued pursuant to Section 6(c) of the Act.

II. Presumptions

40 CFR 162.11(a)(3) provides that a rebuttable presumption shall arise if a pesticide's ingredient(s), metabolite(s) or degradation product(s) meet or exceed (i) acute toxicity risk criteria relating to hazards to humans, domestic animals or wildlife, or (ii) chronic toxicity risk criteria relating to oncogenic, mutagenic, and delayed toxic effects in man and/or test animals, or relating to population reductions in nontarget organisms or fatality to members of endangered species.

Pesticide products containing lindane meet or exceed the chronic risk criteria relating to oncogenic and delayed toxic effects set forth in 40 CFR 162.11(a)(3)(ii)(A) and (B), and the acute toxicity risk criterion relating to hazards to aquatic wildlife set forth in 40 CFR 162.-11(a)(3)(i)(B)(3).

A. *Chronic toxicity.* (1) *Oncogenic effects in test animals.*—40 CFR 162.11(a)(3)(ii)(A) provides, "A rebuttable presumption shall arise if a pesticide's in-

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[1] Lindane is the commercial designation for pesticide products which contain at least 99% of the gamma isomer of benzene hexachloride (BHC). Pesticide products which are designated as BHC are mixtures of the alpha, beta, gamma and delata isomers of BHC, and may contain from approximately 11-18% gamma isomer (technical BHC) to 40-45% gamma isomer (fortified BHC). BHC is the subject of a rebuttable presumption against registration published in the Federal Register on October 19, 1976 (41 FR 46024).

[2] A position document prepared by the Agency working group on lindane is available for public inspection in the Office of Special Pesticide Review (WH-566), Office of Pesticide Programs, Environmental Protection Agency, East Tower, Room 447, 401 M Street, S.W., Washington, D.C. 20460. This position document contains an appendix of references, background information, and other material pertinent to the issuance of this notice of rebuttable presumption. The supporting materials contained in the position document are referenced in this notice where appropriate.

[3] Registrants or other interested persons who desire to submit benefit information should consider submitting information on the following subjects, along with any other relevant information they desire to submit.

1. Identification of the major uses of the pesticide, including estimated quantities used by crop or other application.
2. Identification of the minor uses of the pesticide, including estimated quantities used by category such as lawn and garden uses and household uses.
3. Identification of registered alternative products for the uses set forth in (1) and (2) above, including an estimate of their availability.
4. Determination of the change in costs to the user of providing equivalent pesticide treatment with any available substitute products.
5. Assessment of regulation impact upon user productivity (e.g., yield per acre and/or total output) from using available substitute pesticides or from using no other pesticide.
6. If the impacts upon either user costs or productivity are significant, a qualitative assessment of the regulation's impact on production of major agricultural commodities and retail food prices of such commodities.

gredient(s) * * * [i]nduces oncogenic effects in experimental mammalian species or in man as a result of oral, inhalation or dermal exposure * * *." As a further clarification of this provision, the preamble to the Interim Guidelines states that "a substance will be considered a presumptive cancer risk when it causes a statistically significant excess incidence of benign or malignant tumors in humans or animals." It is emphasized that at the time of issuing this notice of rebuttable presumption, the Agency has not completely assessed the carcinogenic risks associated with the uses of lindane. The primary function of this notice is to solicit information which refutes the evidence, adds to the evidence, or otherwise contributes to the Agency's assessment of risks.

At the time of issuing this notice the Agency is aware of six subacute studies (duration of exposure to a pesticide is less than one-half the normal lifespan of the organism) and four long-term chronic feeding studies assessing oncogenic effects of gamma-BMC[4] in mice and rats. Three studies report that lindane feeding induces benign tumors and one of these studies also describes metastatic invasion of the lungs from some tumors. Seven studies report that lindane feeding did not induce oncogenic changes. In a 1973 report, the International Agency for Research on Cancer (IARC) Working Group on the Evaluation of the Carcinogenic Risk of Chemicals to Man reviewed these studies and concluded that gamma-BHC was carcinogenic in mice because it produced liver cell tumors following oral administration (IARC/WHO (1974), Some Organochlorine Pesticides, *IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man*, Vol. 5, p. 63). This group also concluded that the available feeding studies in rats were inconclusive either because dosages or survival rates were low, or because the published reports did not include sufficient information.

(a) *Studies reporting that Gamma-BHC induced Oncogenic changes in rodents.* Goto et al. fed 5 week old male mice (strain ICR–JCL) 300 or 600 ppm gamma-BHC for 26 weeks (Chemosphere 1(6):279, 1972). Liver tumors were observed in 50% (5/10) of the animals ingesting 600 ppm gamma-BHC. Histologically, the nodules were classified as benign hepatomas. None of the control animals bore tumors. The investigators found no metastases to lymph nodes or other internal organs. Other changes associated with gamma-BHC feeding were a twofold increase in the ratio of liver weight to body weight in the 600 ppm group. Also, five animals (25%) ingesting 600 ppm gamma-BHC died early in the study. There was no microscopic or macroscopic indication of tumor development and no increase in the liver to body weight ratio for the animals ingesting 300 ppm gamma-BHC.

Hanada et al. treated 6-week-old male and female mice (strain dd) with 100, 300, or 600 ppm gamma-BHC for 32 weeks; the animals were then maintained on a basal diet for 6 weeks and sacrificed 38 weeks after feeding started (Gann 64(5):511, 1973). Tumors were found in 4 of 7 females and in 3 of 4 males ingesting 600 ppm gamma-BHC for a combined rate of 64% (7 of 11). None of the control animals (0 of 29) nor animals ingesting 100 ppm (0 of 18) or 300 ppm (0 of 16) gamma-BHC bore tumors. Doses of 300 ppm gamma-BHC produced atypical proliferation of liver cells.

Thorpe and Walker fed four-week-old male and female mice (strain CF1) 400 ppm gamma-BHC for 52 to 110 weeks (Fd. Cosmet. Toxicol. 11:433, 1973). They reported a statistically significant increase in the incidence of hepatic tumors as well as metastases to the lung in the gamma-BHC-fed animals relative to the controls: 96% of the males had hepatic tumors including 11% metasteses and 95% of the females had hepatic tumors without metastases. Hepatic tumors were found in 24% of the control animals, but no metastases were observed in this group.[5] Other observations included toxic effects leading to death during the first three months of lindane-feeding for approximately 15% of the animals. Further, for the entire 110-week experimental period, there was a 90% total fatality record for gamma-BHC-fed animals as compared to 68% for the control group.

(b) *Studies reporting no observed Oncogenic effects.*—(i) *Mouse studies.* Nagasaki et al. fed 20 male mice (strain dd) 100, 250, or 500 ppm gamma-BHC for 24 weeks (Gann 63:393, 1972), and Ito et al. fed male mice (strain dd) 100, 250, or 500 ppm gamma-BHC for 24 weeks (J. Natl. Cancer Inst. 51:817, 1973). None of the control or experimental animals developed tumors in either of these studies.

Herbst et al. fed NMRI mice 12.5, 25, or 50 ppm gamma-BHC for 80 weeks (Toxicology 4:91, 1975). The authors reported benign hepatomas in 5 of 195 control animals and in 4 of 292 lindane-fed animals. Gamma-BHC feeding alone or in combination with polychlorinated biphenyls (PCB) had no oncogenic effect in male mice (strain dd) ingesting these compounds for 24 weeks (J. Natl. Cancer Inst. 51:1637, 1973).

(ii) *Rat studies.* Several studies report that lindane feeding did not cause oncogenic changes. In a lifetime feeding study Fitzhugh et al. fed Wistar rats 5 to 1600 ppm lindane for approximately two years (J. Pharmacol. Exp. Ther. 100:59, 1950). At doses of 5 to 400 ppm no macroscopic or microscopic changes were reported in the tissues examined; the organs of some experimental animals were not examined microscopically. At 800 and 1600 ppm toxic effects reduced the lifespan of some animals and for the survivors led to two-fold increases in liver weight and "slight" or "moderate" liver damage such as enlarged liver cells, fatty degeneration, and necrosis. In Truhaut's lifetime study, rats ingesting 25, 50 or 100 ppm gamma-BHC for two years showed no significant increase in tumor incidence relative to the controls. (Truhaut 1954, cited in FAO/WHO. 1967. Evaluation of some pesticide residues in food).

Ito et al. fed male Wistar rats 500 ppm gamma-BHC for 24 or 48 weeks (J. Natl. Cancer Inst. 54:801, 1975). Liver cell hypertrophy was observed after 48 weeks but no tumors were found in the BHC-fed animals. Ortega et al. fed Sherman rats 50 or 100 ppm lindane for 40 weeks. Liver cell hypertrophy was reported for some animals, but no tumors were found (A.M.A. Arch. Path. 64:614, 1957).[6]

(2) *Reproductive and Fetotoxic effects in mammalian species.* 40 CFR 162.11(a)(3)(ii)(B) provides that "a rebuttable presumption shall arise if a pesticide's ingredient * * * [p]roduces any other chronic or delayed toxic effect in test animals at any dosage up to a level, as determined by the Administrator, which

[4] Lindane is at least 99% gamma-BHC is used in most scientific reports, that term is used in referring to those reports in this notice.

[5] In this study primary tumors were found at extrahepatic sites, primarily lung and lymphatic tissue, in 82% of the control animals. Sher's compilation and analysis of CF1 mouse tumor data from several different studies shows that this strain has a high spontaneous tumor rate at extrahepatic sites (Tox. Appl. Pharm. 30:337, 1974). The Sher compilation shows that in four different studies approximately 75% of the spontaneously forming tumors were found in tissues other than liver and that spontaneously forming liver tumors were found in approximately 25% of the animals. The Thorpe and Walker data are consistent with these data showing that the CF1 strain has a spontaneous tumor rate at extrahepatic sites approximately three times greater than the rate in the liver.

[6] Another bioassay study on the oncognic effects of lindane has been performed by the National Cancer Institute ("NCI") as part of its Bionetics-II program for the evaluation of compounds suspected of carcinogenic activity. This study was commenced in September, 1971, and the last animals were sacrificed in October, 1973. NCI has not yet issued a final report with respect to this study. However, preliminary data was submitted to EPA concerning this study, bearing the notation "Incomplete—not verified." This preliminary data reflects, among other things, pathological diagnoses of tissue sections taken from the animals in the studies and some statistical analyses of the results. Because of the existence of completed studies which provided a sufficient basis for presuming against the registrations of lindane products on the basis of oncogenic effect, the preliminary results of the NCI study were not submitted for formal comment by either CED or CAG, and are not a basis for issuance of a rebuttable presumption against registration in this instance. However, EPA is interested in receiving comments from registrants or other interested persons concerning the significance which should be accorded to the preliminary data which have been received with respect to this NCI study. For this reason, the preliminary data are attached to the Position Document.

is substantially higher than that to which humans can reasonably be anticipated to be exposed, taking into account ample margins of safety." This section reflects concern that chronic exposure to chemicals may result in injury to the reproductive system and/or the fetus and provides that a rebuttable presumption shall arise if chronic exposure in test animals produces such results.

Several studies report that exposure to lindane prior to or during mammalian gestation produces embryotoxic or fetotoxic effects in test animals. These effects include reductions in the size of offspring, delayed and retarded sexual maturation, and increased stillbirth frequency among the offspring of lindane-treated dams. In these studies some effects were observed at most dose levels tested but the lowest dose at which these effects may be observed is not known; nor is it known whether the levels which produced fetotoxic effects in these studies are substantially higher than those "to which humans can reasonably be anticipated to be exposed." In the absence of an established level at which there was no demonstrated effect and the subsequent lack of a basis for choice of an "ample margin of safety", it may be presumed that current exposure may be sufficient to produce reproductive and fetotoxic effects in humans. Accordingly, a rebuttable presumption has arisen pursuant to § 162.11(a)(3)(ii)(B).

(a) *Growth, maturation and reproductive capacity in rats.* Naishtein and Leibovich described (i) delayed initiation of the first estrus in pubescent rats and (ii) longer interestrous periods in the offspring of female rats (mongrel) which had been fed 0.5 mg/kg lindane for four months prior to mating and pregnancy (Hyg. Sanit. 36:190–195, 1971.) Lindane-fed animals averaged 4.0 cycles per month as compared to 6.14 cycles in control animals ($p<0.05$) and they averaged a 4.8 day diestrous as compared to 1.9 days for the control animals ($p<0.05$). These observations indicate that the offspring of lindane-fed females have fewer estrous cycles during their lifetimes and suggest that the reproductive capacity of the new generation will be reduced accordingly.

Treatment with a mixture of lindane (0.02 mg/kg) and DDT (0.05 mg/kg) and with DDT alone (0.02 mg/kg) produced similar results, but treatment with low doses (0.05 mg/kg) of lindane alone had no statistically significant effect. The authors stated that the pesticide concentrations used in these experiments were similar to those occurring in water, food, and soil.

In addition, this report including a graph which showed that at the age of one month the offspring of dams fed 0.5 mg/kg lindane weighed 25 percent less than the offspring of control animals. This suggests that maternal exposure to lindane retards growth of fetal and/or newborn rats. The authors also stated that exposure to lindane increases the number of stillbirths and reduces viability of the surviving offspring. The report does not include the numerical data upon which these conclusions were based.

Petrescu, et al. examined the effects of dietary lindane on the reproductive capacity of four successive generations of rats; 327 rats in the *P*, *F*1, *F*2, and *F*3 generations were studied (Rev. Med. Chirung. 78:831, 1974). The investigators reported that 5, 10, or 15 mg/kg lindane in the diet lengthened the average duration of pregnancy from 21–22 days in the control animals to 21–24 days in the lindane-fed animals, and that 15 mg/kg lindane decreased the fertility index (the number of births relative to the number of animals in the parental population) from 100 births per control parental population to 60 births per parental population in the lindane-fed animals. The report also described dose-dependent delayed opening of the vagina and delayed initiation of the first estrus in the offspring of lindane-fed mothers, and longer cycles in the *F*2 and *F*3 generations. These indicators of retarded sexual maturation and depressed sexual function suggest that exposure to lindane during pregnancy reduces the reproductive capacity of lindane treated parents and represses sexual maturation in subsequent generations.

The study also reported a progressive increase in the proportion of stillbirths with each successive generation. In the F1 there was 1 stillbirth/104 births in animals ingesting 5, 10, or 15 mg/kg lindane and 0/50 stillbirths in the controls. In the F2 there were 25/64 stillbirths in the lindane-fed groups, and 1/45 stillbirths among the controls. In the F3 there were 3/6 stillbirths among the survivors in the lindane-fed groups, and 0/56 in the controls. In addition, spastic paraplegia was observed in 17/119 F1 and 7/52 F2 animals but not in the parental groups (0/14 controls, 0/34 experimentals) nor in the F2 and F3 control groups (0/32 and 0/28, respectively). These data indicate that exposure of rats to lindane during pregnancy increases the incidence of abnormal and stillborn offspring.

(b) *Reproductive capacity, Teratogenesis and stillbirths in dogs.* Earl et al. reported that dietary lindane administered during pregnancy had no significant adverse fetotoxic or teratogenic effects on beagle pups. (Table 1). (InterAmerican Conference on Tox. and Occ. Med. Pesticides and the Environment, A Continuing Controversy). Pesticide feeding began on day 1 or day 5 of gestation at levels of 7.5 or 15 mg/kg/day. Lindane feeding had minimal effects on litter size or on the incidence of pregnancy, resorptions, and teratogenesis. However, lindane-feeding did increase the proportion of stillborn animals. The incidence of stillbirths in the control group was 2 percent; the frequency of stillbirths increased to levels of approximately 18 percent, 23 percent and 30 percent in dogs ingesting lindane at 7.5 mg/kg/day (beginning on day 1 or on day 5) or 15 mg/kg/day (beginning on day 5) during pregnancy.

TABLE 1.—*Effect of dietary lindane on reproductive capacity in dogs*

Protocol/parameter	Pregnant (percent)	Resorption (percent)	Average puppies per litter	Pups with terata (percent)	Stillborn (percent)
Control	87.5	5.1	4.8	1.0	2.0
7.5 mg/kg/d beginning day 1	100.0	0	4.4	0	22.7
7.5 mg/kg/d beginning day 5	85.7	3.3	4.8	1.6	30.5
15 mg/kg/d beginning	84.6	2.9	6.1	0	17.9

(3) *Studies on the isomerization of Gamma-BHC to the Alpha and Beta Isomers.* Separate scientific studies indicate (1) that the alpha and beta isomers of BHC are oncogenic in rodents[7] and (2) that the gamma isomer may isomerize to the alpha and beta forms. This suggests that in addition to the oncogenic and fetotoxic properties inherent in the gamma isomer, lindane may also have additional oncogenic or fetotoxic effects based on the alpha and beta isomers which may be formed as isomerization products of the parent gamma isomer.

The relative thermodynamic stabilities of the four major BHC isomers in order of increasing thermodynamic stability are as follows: gamma<alpha<delta<beta. Moreover, stability to ultraviolet radiation is in the order delta<gamma<alpha<beta. Accordingly, in theory if there were a reaction uniformly capable of converting BHC isomers, the alpha and beta isomers would eventually predominate in systems originally containing only gamma. In other words, there are thermodynamic and photochemical driving forces in favor of the alpha and beta isomers as against the gamma form.

Empirical support for isomerization has been developed in several laboratory studies which indicate that under defined environmental conditions gamma-BHC isomerizes to the more stable isomers. Newland et al. reported that in the anaerobic environment of a simulated lake impoundment an estimated 3.3 percent of the gamma isomer is transformed to alpha-BHC. (J. Water Pollution Contr. Fed. 41:R174, 1969). The corresponding figures for conversion from gamma- to alpha-BHC under aerobic conditions are 0.2 to 1.0 percent. Because aeration influenced the reaction rates, the investigators assumed that isomerization proceeded through a biological mechanism; the responsible organisms were not isolated or identified.

Studies by Benezet and Matsumura on the fate of the gamma isomer in aquatic sediments indicate that the alpha isomer

[7] These studies are summarizzed in the BHC RPAR. See note 1 above.

is present in excess of the levels which would be expected if gamma-BHC were not converted to the alpha form by isomerization (Nature 243:480, 1973). In subsequent studies Matsumura et al. isolated a soil organism, (*Pseudomonas putida*) which isomerizes the gamma isomer, and which is ubiquitous in lakes, soil and sediments. (J. Pesticide Sci. 1:3, 1976). Kamada separately administered the alpha, beta, and gamma isomers to rats by intubation (Jap. J. Hygiene 26:358, 1971). Subsequent analysis of the rat tissues revealed accumulation of alpha- and beta-BHC, indicating that isomers tend to convert to alpha- and beta-BHC within the body.

Studies which indicate that gamma-BHC may isomerize to the alpha and beta isomers make the data which establish that the alpha and beta isomers are oncogenic or fetotoxic to rodents relevant to assessment of lindane's toxic properties. The studies on oncogenesis report that the alpha and beta isomers of BHC induce statistically significant oncogenic changes in 7 different rate and mouse strains. The International agency for Research on Cancer (IARC) has evaluated these studies and concluded that "(t)echnical BHC, its pure alpha, beta and gamma isomers and the mixture of delta plus epsilon isomers are carcinogenic in mice, producing liver-cell tumors following oral administration" (IARC/WHO, 1974, Some Organochlorine Pesticides, IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man, Vol. 5, p. 63). These studies formed the basis for the issuance of a rebuttable presumption against reregistration of BHC on grounds of the oncogenicity and fetotoxicity of BHC and its alpha and beta isomers; they are summarized in that notice and the accompanying position document.

Although the Agency is aware that there are degradation and metabolism studies which have not detected isomerization of gamma-BHC or have found unidentified products, the positive studies nevertheless provide a basis for concern that lindane may possess some of the toxic properties of the alpha and beta isomers. The Agency is presently examining monitoring data which show unexplained and unanticipated high levels of alpha-BHC in ambient air and beta-BHC in adipose tissue: these data may support the studies indicating isomerization. Further studies on the extent of in vivo and environmental isomerization as well as additional confirmatory analytical tests may be necessary.

B. *Acute toxicity*. 40 CFR 162.11(a)(3)(i) sets forth several criteria for which a rebuttable presumption may arise on the basis of the pesticide's acute toxicity to wildlife (40 CFR 162.11(a)(3)(i)(B)). As discussed in the preamble to 40 CFR Part 162 (40 FR 28262), pesticides which meet or exceed the acute toxicity criteria of § 162.11(a)(3)(i)(B) must be closely scrutinized to determine if the hazard which the pesticide's acute toxicity present to these lifeforms necessitates restrictions on use, or denial or cancellation of the registrations.

(1) *Hazard to Wildlife: Aquatic organisms*. Section 162.11(a)(3)(i)(B)(3) specifies that a rebuttable presumption shall arise against a pesticide use for direct application to water if such use when applied to a 6-inch layer of water would result in concentrations more than ½ the acute LC_{50} for aquatic organisms likely to be exposed. Data indicate that certain pesticide products containing lindane labeled for use against mosquito larvae meet or exceed the acute toxicity criteria for representative fish and crustaceans as set forth in § 162.11(a)(3)(i)(B).

To determine whether lindane use in marine/estuarine environments meets rebuttable presumption criteria, the Criteria and Evaluation Division (CED) of the Office of Pesticide Programs used the indicated LC_{50} values for the following representative estuarine/marine species:

Species:	*96-h lindane LC_{50} values (parts per billion)*
Pink shrimp (*penaeus duorarum*)	[1] 0.17
Grass shrimp (*Palamonetes pugio*)	4.44
Mysid shrimp (*Mysidopsis bahia*)	6.28
Sheepshead minnows (*Cyprinodon variegatus*)	103.9
Pinfish (*Lagodon rhomboides*)	30.6

[1] The LC_{50} is here expressed as the concentration of toxicant in the environment measured in parts per billion (ppb).

Calculations based on these values indicate that any application of lindane to estaurine/marine waters greater than 0.000116 lbs/acre would be expected to exceed 1/2 the 96 hour LC_{50} in a 6-inch layer of water for pink shrimp, the species with the lowest LC_{50} among representative species.

To determine whether lindane use in fresh water environments meets rebuttable presumptive criteria, the CED used the indicated LC_{50} values for the following representative fresh water species.[8]

Species:	*96-h lindane LC_{50} values (parts per billion)*
Channel catfish (*Ictalurus punctatus*)	44
Black bullhead (*Ictalurus melas*)	64
Goldfish (*Carassius auratus*)	131
Fathead minnow (*Pimephles promelas*)	87
Carp (*Cyprinus carpio*)	90
Redear sunfish (*Lepomis macrochirus*)	83
Bluegill (*Lepomis macrochirus*)	68
Largemouth bass (*Micropterus salmoides*)	32
Rainbow trout (*salmo gairdneri*)	27
Brown trout (*Salmo trutta*)	2
Coho salmon (*Oncorhyehus kisutch*)	41
Yellow perch (*Perca flavescens*)	68

Calculations based on these values indicate that any application of lindane to fresh water greater than 0.00273 lbs/acre would be expected to exceed ½ the 96 hour LC_{50} in a 6-inch layer of water for brown trout, the species with the lowest LC_{50} among representative species.

[8] See Position Document Reference 76.

The foregoing data and calculations establish that the recommended applications for lindane products registered for aquatic use exceed the acute toxicity criteria of § 162.11(a)(1)(B) for representative fresh and salt water species. Accordingly, a rebuttable presumption arises against the registration of lindane products labeled for aquatic use or any other use which would result in similarly excessive application directly to water.

III. REBUTTABLE PRESUMPTION CRITERIA FOR WHICH THE AGENCY SEEKS ADDITIONAL INFORMATION

A. Population reductions in avian wildlife. (1) *Introduction*.—Section 162.11(3)(ii)(C) provides that a rebuttable presumption shall arise if a pesticide's ingredient(s), metabolite(s), or degradation product(s) can reasonably be anticipated to result in significant local, regional, or national population reductions in nontarget organisms or fatalities to members of endangered species. This provision reflects concern that pesticide contaminants in air, water, soil and food supplies may adversely affect the reproductive efficiency of natural populations, and it contemplates Agency consideration of a pesticide's potential for accumulation in physical and biological segments of the natural environment, and its capacity for producing chronic effects which can reasonably be anticipated to lead to population reductions. The Agency is not now presuming against lindane on this basis, but is seeking information which will permit complete assessment of lindane's potential for producing population reductions, particularly among avian wildlife.

This rebuttable presumption criterion is based on scientific studies which suggest that another organochlorine pesticide, DDT, adversely affected natural avian population through the action of its metabolite, DDE, on avian eggs. Initially, Ratcliffe reported that a decrease in eggshell thickness in natural raptor populations in Britain "coincided closely" with the post-World War II introduction of DDT into general usage; she postulated that exposure to DDT was responsible for eggshell thinning which caused pre-hatch egg breakage, smaller hatch sizes, and ultimately led to the observed decline in natural raptor populations. (Nature 215:208, 1967). Subsequent studies on experimental avian populations attributed the population reduction effect to DDE, a metabolite of DDT. Risebrough and Anderson established that DDE (40 ppm) feeding of experimental mallard populations reduced eggshell thickness by 17% (J. Wildl. Manage. 39(3): 508, 1975), and Longcore and Samson reported that DDE (10 ppm) in the feed of black ducks led to a 22% reduction in eggshell thickness at the egg's equator (J. Wildl. Manage. 37(3): 390, 1973.[9]

[9] Other studies suggest that the mechanism involves pesticide interference with hormonal regulation of calcium metabolism and consequent abnormal mobilization of calcium for eggshell formation. (Jefferies, Ibis 109: 266, 1967; Peakall, Nature 216:505, 1967.)

The Agency's decision to solicit additional information on lindane's possible long-term chronic effects on avian wildlife is based on several separate studies which report 1) that lindane residues are present in tissues and eggs of wild birds, indicating that such populations may be exposed to and may accumulate lindane and 2) that exposure to lindane may increase embryonic mortality in birds. These observations suggest that pesticide uses which may significantly contribute to lindane residues in avian eggs may increase embryonic mortality, an effect which would ultimately lead to population reductions.

(2) *Summary of scientific studies*—(a) *Lindane residues in bird tissues and eggs.* Several studies indicate that lindane residues are present in the tissues and eggs of avian species in nature. The presence of lindane in these avian species and their eggs indicates that these populations are exposed to lindane, that lindane may persist in these birds, and that lindane is excreted in their eggs. As a result, avian embryos may be exposed to lindane during incubation and may experience effects which increase embryonic mortality and lead to population reductions.

Watson and Morgan reported the following lindane residues in the carcass of a golden eagle found in Scotland in 1963: 0.05 ppm in brain, 0.14 ppm in fat, 0.06 ppm in muscle and 0.02 ppm in liver. (Brit. Birds 57:341, 1964). Linder and Dahlgren analyzed lindane levels in the eggs and adult tissues of wild pheasants collected from a region of high pesticide use in South Dakota. (Pesticides Monit. J. 4:227, 1970). In eggs taken from three different areas at two different periods (early May and late June), lindane levels ranged from 0.01 to 0.04 ppm. Lindane was detected in adult pheasant tissue only infrequently in this study. Greichus et al., found lindane residues at 0.07 ppm in muscle and 2.8 ppm in the fat of pelican and cormorant members of a freshwater lake food chain. (S. Dak. Acad. Sci. 48:157, 1969.)

Consistent with these data on lindane residues in natural bird populations is U.S. Department of Agriculture data which indicates that in 1968 lindane was present in poultry meat at levels of 0.01 ppm–3.0 ppm in 10.6% of 2679 samples; in 1971 lindane levels of 0.01–0.5 ppm were reported in 5.0% of 1904 samples. This represented a reduction in the lindane level and in the proportion of samples with residues during this three year period.[10] (Spaulding, Pesticide and Heavy Metal Residue. Proceedings of the Meat Industry Research Conf., American Meat Institute Foundation, Chicago, Illinois, pp. 11–23 reported in Stadelman, Bioscience 93:424, 1973.)

(b) *Embryonic mortality in avian eggs after exposure to lindane.* Sauter and Steele assayed lindane's effects on the reproductive capacity of White Leghorn chickens. (Poultry Sci. 51–76, 1972) (Table 2). Following an initial 10-week pre-experimental observation period hens were fed diets containing 0.1, 1.0 or 10.0 ppm lindane for 10 weeks. Lindane feeding had no measureable effect on egg fertility. However, at each treatment level lindane feeding reduced hatchability and reproductive efficiency, which was defined as the ratio of chicks hatched/hen with controls set at 100. Further, hens ingesting 1.0 and 10.0 ppm lindane produced eggs which had an early mortality rate (embryonic death between days 1 and 7 of incubation) significantly greater than the controls ($p<0.05$). In addition, the data suggest that lindane feeding also increased the incidence of embryonic mortality late (after day 7) in incubation, but since the control data for the different treatment groups varies, this reported increase is not conclusive.

TABLE 2.—*Effect of lindane feeding on chick eggs and embryos*

Control	0.1 p/m	1.0 p/m	1.0 p/m	10.0 p/m
Percent fertilized	97.8	97.9	97.9	97.1
Percent hatch	94.4	83.5	83.4	81.9
Reproduction efficiency	100.0	73.9	73.1	66.1
Percent early mortality (0 to 7 d of incubation):				
A	2.1	1.1	1.0	1.0
B		4.9	8.3	10.9
Percent late mortality (8 to 21 d of incubation):				
A	6.4	9.6	2.1	11.9
B		11.6	8.3	7.2

NOTE.—A=10-week preexperimental observation period.
B=10-week experimental period.

Lutz-Ostertag observed similar lindane-related effects in four successive generations of the Japanese quail. (Arch. Anat. Histol. Embryol. 57:269–282, 1974 (1975)). In this study eggs were sprayed with 1.5%, 3.0% and 6.0% lindane. The embryonic mortality rate in untreated eggs was 6.06%. After lindane treatment for 14 days, the mortality rates were 16.8% for 1.5% lindane and 20.8% for 3.0% lindane. Further, lindane treatment delayed egg production in the offspring of birds from treated eggs by 8 to 15 days relative to untreated groups. Lindane treatment also reduced maximum egg weights from 15.6 gram weights for controls to 14 to 11 grams in eggs of offspring of lindane-treated animals.

B. *Hazards to humans and domestic animals.* Section 162.11(a)(3)(i)(A) provides that a rebuttable presumption shall arise if: (1) The pesticide as formulated has an acute dermal LD_{50} of 40 mg/kg or less; (2) the pesticide has an acute dermal LD_{50} of 6 g/kg or less as diluted for use in the form of a mist or spray; or (3) the pesticide has an inhalation LC_{50} of 0.04 mg/liter or less as formulated.

As discussed in the preamble to 40 CFR Part 162 (40 FR 28262), pesticides which meet or exceed the acute toxicity criteria of § 162.11(a)(3)(i) must be closely scrutinized to determine if the hazard indicated by the acute toxicity characteristics of the pesticides necessitate restrictions on use, or denial or cancellation of the registrations.

Therefore, to determine if a specific product meets or exceeds the acute toxicity criteria of § 162.11(a)(3)(i)(A) the toxicity of each individual product and each of its uses must be determined by testing or extrapolation. Accordingly, each registrant is directed to determine the acute toxicity of each use dilution and of each formulation and to determine whether or not the criteria have been met or exceeded. The registrant shall submit to the Agency that determination for each registration, specifying the data relied upon and shall certify to the Agency whether or not the criteria of § 162.11(a)(3)(i)(A) are met or exceeded. If the criteria are met or exceeded, a rebuttable presumption against registration or continued registration shall arise and the registrant may submit rebuttal evidence pursuant to § 162.11(a)(4).

IV. GROUNDS FOR PESTICIDE REVIEW IN ADDITION TO REBUTTABLE PRESUMPTION CRITERIA

A. *General.* In addition to the risk criteria set forth in 40 CFR 162.11(a)(3) which require the issuance of a notice of rebuttable presumption against registration or continued registration and a determination by the Administrator to register or cancel a pesticide, 40 CFR 162.11(a)(6) provides that the Administrator may determine that a pesticide should be cancelled or that a hearing should be held if the pesticide poses a substantial question of safety to man or the environment "based on toxicological data, epidemiological studies, use history, accident data, monitoring data, or such other evidence as is available to the Administrator."

A determination to cancel or deny registration of a pesticide or to hold a hearing based upon such data and a finding that a pesticide poses a substantial

[10] Other studies on experimental bird populations present additional data on lindane residues in avian tissues and eggs. Liska et al., found the following lindane residues in the fat of turkeys first exposed to a lindane-sprayed range at the indicated time: 2.1 ppm immediately after spraying, 1.0 ppm one week after spraying, and 0.7 ppm two weeks after spraying. Stadelman et al., reported that 0.1 to 0.15 ppm lindane in seed for 14 days led only to transient traces of lindane in tissues, but that 10–15 ppm lindane in feed for 5 days led to residues in body fat and eggs for 10 weeks. Poultry Sci. 44:435, 1965). Ash and Taylor estimated that pheasants fed lindane dressed seed (52–117 ppm) for 82 days consumed approximately 0.5 mg lindane per day and that 430 eggs laid during the experimental period contained an average of 10.7 ppm lindane/egg, indicating that some of the dietary pesticide was excreted via the egg. (Fourth Ann. Rep. Game Res. Assoc. pp. 14–20, 1964.)

question of safety need not be preceded by public notice and opportunity for rebuttal prior to the administrative adjudicatory hearing procedure of Section 6(b) of the Act. However, where the Agency is issuing a notice of rebuttable presumption against registration or continued registration based on the risk criteria of 40 CFR 162.11(a)(3), it is in the public interest to include in that notice all evidence which may indicate additional grounds for determining that a pesticide causes unreasonable adverse effects on the environment. Accordingly, evidence derived from lindane's use and accident history which suggests that lindane may produce hemotoxic effects in humans has been included in this notice.

B. *Hemotoxic effects in humans.* Several reports in the medical literature indicate that lindane may be a primary or contributing factor in the development of several human blood dyscrasias, particularly aplastic anemia and possibly leukemia. These reports, summarized below, are based upon medical case histories in which human exposure to lindane, both from normal use and from accidental overexposure, appeared to be linked to subsequent development of bone marrow and blood disorders. Although the number of cases is relatively small and the incidence of disease appears to depend more on individual susceptibility than on exposure per se, the evidence is sufficient to warrant Agency consideration of lindane's possible hemotoxic effects. Moreover, these reports of lindane-associated hemotoxic effects in humans are consistent with medical reports indicating that other chlorinated hydrocarbon pesticides such as DDT and chlordane may be hemotoxic in humans, inducing bone marrow and blood disorders. (West, Arch. Environ. Health 15:97; 1967; Schuettman, Z Gesamte Hyg. 17:12, 1971; and Mastromatteo, Can. Med. Assoc. J. 90: 1166, 1964).

For these reasons, the Agency is soliciting comment on the available evidence and requesting submission to the Agency of any additional cases or relevant information. Further, in view of the infrequent but nonetheless persistent reports of lindane-associated hemotoxicity in only a small portion of persons who have been regularly exposed to lindane, the Agency particularly solicits comment on the questions of individual sensitivity to lindane and the epidemiology of lindane-associated hemotoxic effects. Also, the medical literature indicates that there are no reliable animal tests for confirming or denying the reports of hemotoxic effects in humans, and the Agency is not aware of definitive animal studies in which lindane-related hemotoxic effects have been observed. For this reason, the Agency is also seeking information on animal test systems in which lindane-related hemotoxicity has been or could be assayed.

1. *Blood dyscrasias associated with exposure to Lindane only.* (a) Aplastic Anemia and Hypoplastic Bone Marrow. West summarized the medical case histories of five California residents who developed aplastic anemia following exposure to lindane. (Arch. Environ. Health 15:97, 1967). In each case, the patient (1) was exposed to lindane in use for pest control purposes, (2) became ill from nine days to a year after exposure to lindane, and (3) had no known exposure to any other known hemotoxic agent. Two of the patients were exposed through lindane home vaporizers,[11] two were exposed to lindane which had been sprayed in their homes, and the fifth patient was accidentally engulfed in a "cloud" of lindane being sprayed in a relative's yard. A diagnosis of aplastic anemia was made in each case and aplastic anemia or hypoplastic bone marrow was listed as a cause of death in four of the five cases.

Vodopick described aplastic anemia in a two-year-old child who was exposed to lindane during a three month period in which a preparation containing lindane was used to treat the family dog for mange (J.A.M.A. 234:850, 1975). The patient had no known exposure to any other known hemotoxic agent. When, following determination of the lindane source, the mange treatment was discontinued, the child recovered. Woodliff *et al.* described a similar case in Australia (Med. J. Austral. *1*:628, 1966). A woman who had washed her dog each week for two years in a 2% lindane solution was diagnosed as having bone marrow hypoplasia, "probably consequent upon exposure to lindane." She died three months later.

PERS[12] Report 71-173 describes a case in which a 79 year old woman developed aplastic anemia after she "made an error" while using a lindane-containing spray against a hornets' nest in her home and sprayed herself in the eye. She first sought medical treatment five days later; two months after the spraying incident her condition was diagnosed as pancytopenia with severe anemia and severe thrombocytopenia. She died three months after exposure. The immediate cause of death was a cerebro-vascular accident with thrombocytopenia and toxic aplastic bone marrow listed as secondary factors. The medical reports described hemotoxic effects only, and did not indicate any damage to the eye or skin (Position Document reference no. 86).

Samuels and Milby studied the effects of lindane exposure on 79 California residents who had been regularly exposed to lindane in their homes or businesses. (J. Occ. Med. 13:147, 1971), and in a companion study, compared a small sample (40 persons) which had been occupationally exposed to lindane with a sample which had not (J. Occ. Med. 13: 257, 1971). These studies reported lindane-associated changes in five blood parameters (lindane content, blood creatine level, reticulocyte count, white blood cell count and polymorphonuclear leukocyte count), but there was no evidence of pancytopenia with reticulopenia, a key indicator of hyoplastic or aplastic anemia. Specifically, none of the changes exceeded the normal range and there was no illness attributable to hemotological disorder. These investigators did note, however, that some observations were sufficiently "bizarre" to require a conclusion that the hematopoietic system was not "entirely normal" in a few subjects.

(b) *Other blood dyscrasias.* Medical reports have linked lindane to other blood dyscrasias in persons who have had no known exposure to any other known hemotoxic agent. In the report described above, West listed the case of a child exposed to a lindane home vaporizer for over a year. After an initial "tentative diagnosis of atypical leukemia" her condition was later described as a "serious blood dyscrasia." She recovered after the vaporizer was removed. Also, as reported above, Samuels and Milby noted unusual and unclassificable hematologic findings in a few of the subjects in their study.[13]

2. *Cases involving exposure to Lindane in combinations with other chemicals.* (a) Aplastic Anemia or Hypoplastic Bone Marrow. There are some reports of aplastic anemia attributed to exposure to lindane and/or another possible hemotoxic agent. Albaharay et al. described the case of a sanitation department employee who developed panmyelopthisis[14] 9 days after exposure to DDT and lindane. (Arch. Mal. Prof. 18:687, 1957). Similarly, a teen-age boy developed a fatal case of aplastic anemia after exposure for two months to lindane and DDT while working on a California farm. The clinical diagnosis was, in part, "aplastic anemia due to exposure to insecticides." (Am. J. Med. 19:274, 1955). In discussing this case at a Barnes Hospital Clinical Pathological Conference, Dr. Shank stated his belief, based upon his review of the medical literature and case reports, that lindane rather than DDT was more probably the responsible hemotoxic agent.

PERS Report 71-183[15] describes a case of fatal aplastic anemia in an Oregon farmer who experienced inhalation and dermal exposure to lindane and toxaphene while spraying cattle in April 1969. He was treated for respiratory symptoms for nearly a year following the onset of illness. In September 1970 his condition was diagnosed as aplastic anemia secondary to lindane and toxaphene expo-

[11] All registrations for "continuous" lindane vaporizers have been cancelled; three registrations for "one-shot" vaporizers are currently in effect. See Regulatory History summary in the Lindane Position Document.

[12] The Agency maintains a Pesticide Episode Reports System (PERS) which collects reports of pesticide exposure affecting humans, domestic animals, livestock, and wildlife. Copies of the PERS report are included as references to the Lindane Position Document. See n.2 above.

[13] In a study of lindane's possible fetotoxic effects, Petrescu, et al., reported that dietary lindane (5, 10 or 15 mg/kg) did not affect the blood or bone marrow in rats.

[14] Dorland's Medical Dictionary describes this condition as "general aplasia of the bone marrow."

[15] See footnote 13 above.

sure. The autopsy report identified the cause of death as (1) acquired aplastic anemia due to lindane and toxaphene exposure and (2) acute myelomonocytic leukemia secondary to condition (1) (Position Document Appendix reference no. 90).

(b) *Other blood dyscrasias.* The medical literature includes reports of other bone marrow and blood disorders following simultaneous exposure to lindane and another hemotoxic agent. Jedlicka, *et al.*, described the cases of two 20-year-old first cousins who lived and worked together and who, after simultaneous exposure to lindane and DDT, both developed paramyeloblastic leukemia. (Acta Med. Scan. 161:447, 1958). The authors concluded that there was a causal relation between lindane and leukemia in these cases. Hoshizaki et al. reported a case of leukemia in a sanitation department employee who was regularly exposed to DDT and lindane (Acta Haem. Jap. 32:672, 1969).[16]

(3) *Epidemiological considerations.* The import of the foregoing observations of lindane-associated hemotoxicity is somewhat limited by the relatively small number of cases. This prevents evaluation of these reports in accordance with customary statistical and epidemiological criteria and thus precludes determination of whether there is or is not a cause and effect relation between lindane exposure and blood dyscrasia. A second factor preventing definitive studies is the lack of a suitable animal model for experimentation.

The medical case histories summarized here and elsewhere do not satisfy epidemiologic criteria for establishing a cause and effect relationship between lindane and blood dyscrasia. However, the reports which describe simultaneous lindane exposure in several people, followed by the development of clinical symptoms in only one of the persons so exposed suggest that adverse reaction to lindane is highly individualized. For example, in Vodopick's report of the child who developed aplastic anemia after lindane usage for the family dog's mange, neither the child's 9-year-old brother nor his father exhibited symptoms even though they too were exposed to the treatment mixture. In West's first case three family members were exposed to the pesticide in their home, but only one person developed aplastic anemia. Further, the child in West's third case was exposed while playing in a neighboring child's home, but there is no indication that this child, who presumably was exposed to a greater extent than her visitor, presented any symptoms. West also included a case which was diagnosed as "atypical leukemia" in which other members of the family did present "abnormal" blood counts and "mild anemia."

Occupational exposure to lindane has been linked to bone marrow dyscrasias in 2 sanitation department employees who worked with pesticides (Hoshizaki et al. and Albaharay et al., cited above), 2 farmworkers (Friberg and Martenson, A.M.A. Arch. Indust. Hyg. 8:166, 1953; Am. J. Med. 19:274, 1977) and others who worked with lindane shortly before developing symptoms (Jedlicka et al. cited above); yet Milby and co-workers' systematic investigation did not uncover evidence of any significant hematological disorders in 79 persons exposed regularly to lindane. These investigators did note, however, that if lindane-associated hematological disturbance is dependent on individual characteristics such as rare hypersensitivity or genetic predisposition, their study would not have detected this type of pesticide effect because of the small population studied in their sample. Other physicians and scientists have also commented that lindane's adverse effects may depend on individual hypersensitivity.

IV. Registrations and Products Subject to the Notice

All registrants and applicants for registration listed below are being notified by certified mail of the rebuttable presumption existing against registration and continued registration of their products.[17]

The registrants and applicants for registration shall have 45 days from the date this notice is sent or until April 18, 1977, to submit evidence in rebuttal of the presumption. However, the Administrator may, for good cause shown, grant an additional 60 days during which such evidence may be submitted. Notice of such an extension, if granted, will appear in the Federal Register.

V. Duty to Submit Information on Adverse Effects

Registrants are required by law to submit to EPA any additional information regarding any adverse effects on man or the environment which comes to a registrant's attention at any time, pursuant to Section 6(a)(2) of the Federal Insecticide, Fungicide, and Rodenticide Act and 40 CFR 162.8(d). If any registrant of lindane has any published or unpublished information, studies, reports, analyses, or reanalyses regarding any adverse effects in animal species or humans, residues, and claimed or verified accidents to humans, domestic animals, or wildlife, which has not been previously submitted to EPA, the material must be submitted immediately. At the time each registrant responds to this notice, each registrant shall submit a written certification to the Agency that all information regarding any adverse effects known to the registrant has been submitted. In addition, the registrants should notify EPA of any studies currently in progress, including the purpose of the study, the protocol, the approximate completion data, and a summary of all results observed to date.

VI. Public Comments

A Position Document, dated January 17, 1977, prepared by an Agency Working Group on lindane and containing background information and copies of references to published studies and Agency reports is available for public inspection. During the time allowed for submission of rebuttal evidence, comments on the presumptions set forth in the notice and on the material contained in the Position Document are also solicited from the public. In particular, any documented episodes of adverse effects to humans, domestic animals, or wildlife, and information as to any laboratory studies in progress or completed, are requested to be submitted to EPA as soon as possible. Likewise, any studies or comments on the benefits from the use of lindane are requested to be submitted. All comments and information should be sent to the Federal Register Section, Technical Services Division (WH-569), Office of Pesticide Programs, Rm. 401, East Tower, 401 M St. S.W., Washington, D.C. 20460. Three copies of the comments or information should be submitted if possible to facilitate the work of the Agency and others interested in inspecting them. The comments and information should bear the identifying notation "OPP-30000/10." Comments and information received within the specified time limit shall be considered before it is determined whether a notice shall be issued in accordance with 40 CFR 162.11(a)(5)(ii).

Comments received after the specified time period will be considered only to the extent feasible consistent with the time limits imposed by 40 CFR 162.11(a)(5)(ii). All written comments and information filed pursuant to this notice will be available for public inspection in the office of the Federal Register Section from 8:30 a.m. to 4:00 p.m. during normal working days. The material contained in the Position Document is available for public inspection in the Office of Special Pesticide Re-

[16] Other similar cases in which lindane may be a factor are not included here because the published reports refer only to "benzene hexachloride" (BHC) and do not specify whether the term refers to lindane, the gamma isomer of BHC, or to technical grade BHC which is a mixture of BHC isomers. See, for examples, Gewin, J.A.M.A. 171:1624, 1959; Danapoulous, A.M.A. Arch. Indust. Hyg. Occ. Med. 8:582, 1953.

[17] Several of the products which are the subject of this RPAR notice are pesticides registered by this Agency, and also drugs subject to approved new drug applications or approved abbreviated new drug applications granted by the Food and Drug Administration under the Food, Drug and Cosmetic Act. Pursuant to Interagency Agreements dated December 12, 1971 and September 6, 1973, primary responsibility for evaluating the risks and benefits of these products was allocated to the Food and Drug Administration (See 36 FR 24234 (1971) and 38 FR 24233 (1973).) This Agency and the Food and Drug Administration are currently considering whether action should be taken to eliminate regulation of these products by both agencies. Pursuant to FIFRA Section 25(b), this Agency may by regulation exempt from FIFRA requirements any pesticide product which the Administrator determines "to be adequately regulated by another Federal Agency. * * *"

view, Rm. 447, East Tower, during the same time period.

Dated: February 8, 1977.

EDWIN L. JOHNSON,
Deputy Assistant Administrator for Pesticide Programs.

NOTE.—Your cooperation is solicited in identifying any errors or omissions which may have been made in the following computer listings. Corrections to the listings may not necessarily be published in the FEDERAL REGISTER, but rather handled by mail with affected parties. Omissions will be corrected by notice in the FEDERAL REGISTER.

(00148) **** PRODUCT SEARCH LISTING ****

11/29/76 APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING LINDANE PAGE 1

****

REGISTRANT *NAME AND ADDRESS*

* 000148 THOMPSON-HAYWARD CHEMICAL COMPANY
BOX 2383
KANSAS CITY KS 66110

********** PRODUCT NAME **********

08817 BHC W-12 OK

****

REGISTRANT *NAME AND ADDRESS*

* 000239 CHEVRON CHEMICAL COMPANY
ORTHO DIVISION 940 HENSLEY WAY
RICHMOND CA 94801

********** PRODUCT NAME **********

06418 ORTHO ISOTOX-LINDANE SPRAY NO.200 CA

06419 ORTHO ISOTOX LINDANE WETTABLE 25 CA

****

**** PRODUCT SEARCH LISTING ****

(00279) PAGE 2

APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING LINDANE

11/29/76

****

REGISTRANT *NAME AND ADDRESS*

* 000279 FMC CORP.
AGRICULTURAL CHEM DIV.
100 NIAGARA ST.
MIDDLE PORT NY 14105

********** PRODUCT NAME **********

04742 LINDANE 20 MISCIBLE CA

****

REGISTRANT *NAME AND ADDRESS*

* 000550 VAN WATERS & ROGERS INC BRAUN KNECTH HEIMANN DIV
BOX 3200
SAN FRANCISCO CA 94119

********** PRODUCT NAME **********

06417 NAMCO K-T-D

****

REGISTRANT *NAME ANC ADDRESS*

* 000595 HAVILAND AGRICULTURAL CHEMICAL CO
1845 STERLING NW
GRAND RAPIDS, MI 49502

********** PRODUCT NAME **********

06423 LINDANE 20% MI

****

(00682) **** PRODUCT SEARCH LISTING ****

11/29/76 APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING LINDANE PAGE 3

****

REGISTRANT *NAME AND ADDRESS*

* 000682 WOODS INDUSTRIES
DBA-CORP KING CHEMICAL
P O BOX 1016
YAKIMA WA 98907

********** PRODUCT NAME **********

05589	CROP KING ZL 3-3	WA
05590	CROP KING ZL-C	WA
05591	CROP KING Z B	WA

****

REGISTRANT *NAME AND ADDRESS*

* 000909 COCKE LABORATORY PRODUCTS
4759 S DURFEE AVE
PICO RIVERA CA 90660

********** PRODUCT NAME **********

04696	COOKE BUG SHOT FORTIFIED ROTO-LIND GARDEN SPRAY	
06414	COOKE SOWBUG AND CUTWORM DUAL BAIT CONTROL	CA
06420	COOKE KILL-BORE	CA
06421	COOKE DOUBLE DUTY ROSE SPRAY	CA
06422	COOKE DIGIN	CA

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(01202) **** PRODUCT SEARCH LISTING ****

11/29/76 APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING LINDANE PAGE 4

****

REGISTRANT *NAME AND ADDRESS*

* C01202 PUREGRO COMPANY
1052 W 6TH ST
LOS ANGELES CA 90017

********** PRODUCT NAME **********

05082 PUREGRO LINDANE SULFUR 1.5-50 DUST CA

****

REGISTRANT *NAME AND ADDRESS*

* 001208 JANSON IND PLAINSMAN AGRICULTURAL
BOX 174
PLAINVIEW, TX 79880

********** PRODUCT NAME **********

03209 PLAINSMAN 3-0-0 BHC DUST(CONTAINS BHC) TX

****

REGISTRANT *NAME AND ADDRESS*

* 001307 MAGNOLIA CHEMICAL CO INC
2646 RODNEY LANE
DALLAS TX 75220

********** PRODUCT NAME **********

09452 CAMATAM 40 F TX

****

(01871) **** PRODUCT SEARCH LISTING ****

11/29/76 APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING LINDANE PAGE 5

****

REGISTRANT *NAME AND ADDRESS*

* 001871 FARMCRAFT, INC
8900 S W COMMERCIAL
TIGARD OR 97223

********** PRODUCT NAME **********

09206 FARMCRAFT LINDANE 25 OR

****

REGISTRANT *NAME AND ADDRESS*

* 001969 PARSONS CHEMICAL
BOX 146
GRAND LEDGE MI 48837

********** PRODUCT NAME **********

03303 PARSONS B-59 SEED BEAN DRILL BOX TREATMENT MI

****

REGISTRANT *NAME AND ADDRESS*

* 002553 BUHL CHEMICAL COMPANY
601 A BROOKHAVEN DR
ORLANDO, FL 32803

********** PRODUCT NAME **********

04912 SMEAR SEAL SCREWWORM KILLER FL

****

(C2839) **** PRODUCT SEARCH LISTING ****

11/29/76 APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING LINDANE PAGE 6

****

REGISTRANT *NAME AND ADDRESS*

* 002839 SANITEK PRODUCT INC
3959 GOODWIN AVE
LOS ANGELES CA 90039

********** PRODUCT NAME **********

05622 LINETHAN CA

05624 BANES LABORATORIES BATH A MONTH CA

****

REGISTRANT *NAME AND ADDRESS*

* 002935 WILBUR ELLIS CO.
P. O. BOX 1286
FRESNO, CA 93715

********** PRODUCT NAME **********

08116 RED-TOP LINDANE 1.7 SPRAY CA

08117 RED-TOP LINDANE 20 SPRAY CA

****

(03238) **** PRODUCT SEARCH LISTING ****

11/29/76 APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING LINDANE PAGE 7

****

REGISTRANT *NAME AND ADDRESS*

* 003238 AGRICO CHEMICAL CO.
CROP PROTECTION CHEMICAL DIV.
BOX 3451
TULSA, OK 74101

********** PRODUCT NAME **********

09200 STANDARD FLEA DUST (CR SPRAY)

****

REGISTRANT *NAME AND ADDRESS*

* 003286 FERD STAFFEL CO.
P.O. BOX 2380
SAN ANTONIO TX 78298

********** PRODUCT NAME **********

08067	STAFFEL'S LINDANE 20% EMULSIFIABLE	TX
08071	STAFFEL'S EQ 335	TX
08080	STAFFEL'S TOXAPHENE-LINDANE STOCK SPRAY & DIP	TX
08627	STAFFEL'S ROOST PAINT WITH LINDANE	TX
08628	STAFFEL'S LIN-DUST	TX

****

(C3509) **** PRODUCT SEARCH LISTING ****

11/29/76 APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING LINDANE PAGE 8

****

REGISTRANT *NAME AND ADDRESS*

* 003509 SAFE WAY FARM PRODUCTS COMPANY
2519 E FIFTH ST
AUSTIN TX 78702

********** PRODUCT NAME **********

06432 SILVERTOX TX

10174 SCARLET RED SCREW WORM BCMB TX

****

REGISTRANT *NAME AND ADDRESS*

* 004981 REDWOOD CHEMICAL INC
12245 ROBIN BLVD
HOUSTON, TX 77045

********** PRODUCT NAME **********

05419 REDWOOD'S 20% LINDANE EMULSIFIABLE CONCENTRATE TX

****

REGISTRANT *NAME AND ADDRESS*
004876 Seedkem, Inc.
526 NW Fourth Street
Evansville, Indiana 47708

PRODUCT NAME
00054 Lice and Flea Powder

REGISTRANT *NAME AND ADDRESS*
005533 Octavius Hunt Ltd.
Dove Lane, Red Field-Bristol
B.S. 5 9NQ, England

PRODUCT NAME
00001 Fumite

(05481) **** PRODUCT SEARCH LISTING ****

11/29/76 APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING LINDANE PAGE 9

****

REGISTRANT *NAME AND ADDRESS*

* 005481 AMVAC CHEMICAL CORP
4100 EAST WASHINGTON BLVD
LOS ANGELES, CA 90023

********** PRODUCT NAME **********

03865 ALCO KALI-CON CA

04741 ALCO LINDANE 20 SPRAY CA

****

REGISTRANT *NAME AND ADDRESS*

* 005778 GRO CHEMICAL COMPANY
3530 NW 31ST ST
MIAMI FL 33142

********** PRODUCT NAME **********

03289 ROSE SPRAY FL

03292 MANY PURPOSE GARDEN SPRAY FL

04965 OIL PLUS LINDANE FL

****

REGISTRANT *NAME AND ADDRESS*
005645 Veterinary Laboratories, Inc.
P.O. Box 5394
12340 Santa Fe Drive
Lenexa, Kansas 66215
PRODUCT NAME
00014 Four-Way Screw Worm Bomb

(05967)

11/29/76 **** PRODUCT SEARCH LISTING ****

APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING LINDANE

PAGE 10

****

REGISTRANT *NAME AND ADDRESS*

* 005967 MOYER CHEMICAL COMPANY
BOX 945
SAN JOSE CA 95108

********** PRODUCT NAME **********

06416 MALATHION TOXAPHENE BHC DUST NO 4-10-2

CA

****

REGISTRANT *NAME AND ADDRESS*

* 006853 BES TEX INSECTICIDES
713 S. OAKES PO BOX 664
SAN ANGELO TX 76901

********** PRODUCT NAME **********

C8611 BES-TEX LIVESTOCK DUST

TX

****

REGISTRANT *NAME AND ADDRESS*

* 006926 POOL CARL LABS INC
1133 E MISSOURI AVE
ELMENDORF TX 78112

********** PRODUCT NAME **********

04045 CARL POOL GENERAL PURPOSE SPRAY

04046 CARL POOL GENERAL FLOWER,SHRUB AND TREE SPRAY TX

TX

****

(07404) **** PRODUCT SEARCH LISTING ****

11/29/76 APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING LINDANE PAGE 11

****

REGISTRANT *NAME AND ADDRESS*

* 007404 NULIFE FERTILIZERS DIV OF HYGRADE FOOD PRODUCTS
CORP PO BOX 883
TACOMA WA 98401

********** PRODUCT NAME **********

08118 NULIFE 10-20-20 WITH LINDANE

****

REGISTRANT *NAME AND ADDRESS*

* 007421 CALIFORNIA LIQUID FERTILIZER COMPANY
# 50 ARROYO ANNEX
PASSADENA CA 91105

********** PRODUCT NAME **********

08680 LAST-BITE NEW FORMULA SOWBUG AND CUTWORM KILLER CA

****

REGISTRANT *NAME AND ADDRESS*

* 007478 CHEM PAK COMPANY
10402 S. W. 186TH TERRACE
SOUTH MAIMI FL 33157

********** PRODUCT NAME **********

07974 GARDENS OF THE SOUTH ORCHID INSECTICIDAL SPRAY FL

08014 LINDANE EMULSIVE 20% CONCENTRATE FL

(07478) **** PRODUCT SEARCH LISTING ****

11/29/76 PAGE 12

**CONTINUE REGISTRANT 007478

08818	GARDENS OF THE SOUTH ROSE DUST	FL
08819	GARDENS OF THE SOUTH GARDEN SPRAY EC	FL
08820	ROSE SPRAY LIQUID	FL
08821	ROSE & POINSETTIA SPRAY	FL
08822	MRS. GRANT'S SPECIAL FORMULA ROSE SPRAY	FL
08823	GARDENS OF THE SOUTH ROSE SPRAY	FL
08824	ROSE DUST	FL

****

REGISTRANT *NAME AND ADDRESS*

* 008127 AGGIE CHEMICAL INDUSTRY
PO BOX 8335
SAN ANTONIO TX 78208

********** PRODUCT NAME **********

04966	B.H.C. 1.2-EC	TX
04967	20% LINDANE EC	TX

****

REGISTRANT *NAME AND ADDRESS*

006720 Southern Mill Creek Products
Company Inc.
Box 1096
Tampa, Florida 33601

PRODUCT NAME

03362 SMCP Lindane E-20

(08773)

**** PRODUCT SEARCH LISTING ****

11/29/76

APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING LINDANE

PAGE 13

****

REGISTRANT *NAME AND ADDRESS*

* 008773 AMERICAN FERTILIZER & CHEMICAL COMPANY
PO BOX 98
HENDERSON CO 80640

********** PRODUCT NAME **********

06724 LINDANE 20

07040 LINDANE W-25 CO

CO

****

REGISTRANT *NAME AND ADDRESS*

* 005169 SEMINOLE STORES INC
P O BOX 940
OCALA FL

********** PRODUCT NAME **********

09456 LINDANE & MANEB DUST #2-5

09457 2% LINDANE DUST FL

09458 LINDANE & SULPHUR DUST #2-80 FL

09461 MARICO BRAND 1.2% LINDANE DUST FL

FL

****

(09404) **** PRODUCT SEARCH LISTING ****

11/29/76 APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING LINDANE PAGE 14

****

REGISTRANT *NAME AND ADDRESS*

* C09404 CHASE & COMPANY
BOX 1697
SANFORD FL 32771

********** PRODUCT NAME **********

04744 SUNNILAND LINDANE FL

****

REGISTRANT *NAME AND ADDRESS*

* 009782 WOODBURY CHEMICAL COMPANY
PO BOX 4319
PRINCETON FL 33030

********** PRODUCT NAME **********

03262 LINDANE 1.7-E FL

03612 BHC LIQUID FL

****

(09859) **** PRODUCT SEARCH LISTING ****

11/29/76 APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING LINDANE PAGE 15

****

REGISTRANT *NAME AND ADDRESS*

* 009859 LANDIA CHEMICAL COMPANY
1801 W. OLIVE ST
LAKELAND FL 33801

********** PRODUCT NAME **********

05635 BHC E-11 FL

****

REGISTRANT *NAME AND ADDRESS*

* 010371 CAPE CHEMICAL COMPANY
33 N FREDERICK
CAPE GIRARDEAU MO 63701

********** PRODUCT NAME **********

08979 DOG FLEA POWDER MO

08980 HOG LICE POWDER MO

08981 PUFF BAG DUST MO

****

(10873) **** PRODUCT SEARCH LISTING ****

11/29/76 APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING LINDANE PAGE 16

****

REGISTRANT *NAME AND ADDRESS*

* 01C873 TIFTON CHEMICAL COMPANY
PO BOX 5
TIFTON GA 31794

********** PRODUCT NAME **********

03304 TIFCHEM BHC E-11 GA

08826 TIFCHEM BHC - 11 GA

****

REGISTRANT *NAME AND ADDRESS*

* 01C972 CASTLE A L INC
PO BOX 877
MORGAN HILL CA 95037

********** PRODUCT NAME **********

08689 CASTLE BRAND DUST BHC-2 G-THION MANEB 2-5.6 CA

****

(10975) **** PRODUCT SEARCH LISTING ****

11/29/76 APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING LINDANE PAGE 17

****

REGISTRANT *NAME AND ADDRESS*

* 010975 CHEMILENE COMPANY
4937 TELEGRAPH RD
LOS ANGLES CA 90022

********** PRODUCT NAME **********

06428 CHEMILENE'S LINDANE 1.0 EC CA

****

REGISTRANT *NAME AND ADDRESS*

* 011093 MASTER NURSERYMEN'S ASSN C/O LEO DUPUICH
3620 1/2 MT DIABLO BLVD
LAFAYETTE CA 94549

********** PRODUCT NAME **********

07370 49'ER BRAND ROSE DUST CA

****

REGISTRANT *NAME AND ADDRESS*

* 011134 PEST CONTROL CHEMICALS INC
5852 S WESTERN AVE
LOS ANGELES CA 90047

********** PRODUCT NAME **********

06622 PESTCO TERM-A-FUME SOLUTION CA

08678 PESTCO KAL-A-FUME CA

(11134) **** PRODUCT SEARCH LISTING ****

11/29/76 PAGE 18

**CONTINUE REGISTRANT 011134

08679 PESTCO LINDANE EMULSIFIABLE CONCENTRATE CA

****

REGISTRANT *NAME AND ADDRESS*

* 015887
Agricultural Chemical Company of Dallas
East Kiest Blvd.
Dallas, Texas 75203

********** PRODUCT NAME **********

06425 HI BRAND COTTON DUST 3-0-0 TX

06426 HI BRAND BHC E-1 TX

06427 HI BRAND 20% LINDANE SPRAY CONCENTRATE TX

****

REGISTRANT *NAME AND ADDRESS*

* 025242 CITY HEALTH FUMIGATING SERVICE
1914 CLAIRMOUNT AVENUE
DETROIT MI

********** PRODUCT NAME **********

05253 BUG-NO-MOR MI

****

REGISTRANT *NAME AND ADDRESS*

019382 Alpha Research Chemical Co.
P. O. Box 1502
Grand Forks, N.D. 58201

PRODUCT NAME

00006 Alpha -G

(32196) **** PRODUCT SEARCH LISTING ****

11/29/76 APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING LINDANE PAGE 19

****

REGISTRANT *NAME AND ADDRESS*

* 032196 KARE CHEMICAL COMPANY
OPA-LOCKA AIRPORT BLDG 148 EAGLE PLAZA
OPA-LOCKA FL

********** PRODUCT NAME **********

08272 EAGLE CHINCH LAWN SPRAY WITH TRITHION FL

****

REGISTRANT *NAME AND ADDRESS*

* 035133 CRYER PEST CONTROL, INC
215 S. HWY 146
BAYTOWN, TX 77520

********** PRODUCT NAME **********

09321 C&C PROFESSIONAL MOSQUITO SPRAY TX

****

REGISTRANT *NAME AND ADDRESS*

* 035253 AGRA CHEM SALES COMPANY
P. O. BOX 1356
AVON PARK, FL 33825

********** PRODUCT NAME **********

08629 LINDANE-TOXAPHENE LIVESTOCK SPRAY OR DIP FL

****

(37923) **** PRODUCT SEARCH LISTING ****

11/29/76 APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING LINDANE PAGE 20

****

REGISTRANT *NAME AND ADDRESS*

* 037923 U.S. DEPT. OF AGRIC.
STORAGE LOT
DUBLIN, GA 31021

********** PRODUCT NAME **********

09418 BORERTROL MO

****

REGISTRANT *NAME AND ADDRESS*

* 037931 GEORGIA FORESTRY COMMISSION
7 HUNTER ST. S.W.
ATLANTA, GA 30334

********** PRODUCT NAME **********

09310 LINDANE SOLUTION 0.5% GA

****

REGISTRANT *NAME AND ADDRESS*

* 038412 PINEAPPLE GROWERS ASSOCIATION
OF HAWAII
1902 FINANCIAL PLAZA OF PACIFIC
HONOLULU, HI 96813

********** PRODUCT NAME **********

10064 LINDANE (GAMMA ISOMER OF BENZENE HEXACHLORIDE) HI

****

(00004) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 1

****

REGISTRANT *NAME ANC ADDRESS*

* 00C004 BONIDE CHEMICAL CO. INC.
2 WURZ AVE.
YORKVILLE NY 13495

********** PRODUCT NAME **********

00076 BONIDE LINDANE 25% W INSECTICIDE SPRAY POWDER

00C84 BONIDE BOREH-MINER KILLER

00103 BONIDE ROSE AND FLOWER SPRAY OR DUST WITH LINDANE

00115 BONIDE EVERGREEN-FLOWER INSECT SPRAY

00125 BONIDE RCSETOX INSTANT LIQUID

C0220 BONIDE BORER MINER KILLER-5

****

REGISTRANT *NAME AND ADDRESS*

* 000059 BURROUGHS WELLCOME COMPANY
BURROUGHS WELLCOME COMPANY
3030 CORNWALLIS RCAD
RESEARCH TRIANGLE PARK, NC 27709

********** PRODUCT NAME **********

00055 COOPER - TOX EXTRA

00096 FENATOX

00112 PULVEX FLEA AND TICK SPRAY WITH REPELLENT

00114 PULVEX ANTI-FLEA COLLAR FOR CATS

00115 PULVEX ANTI-FLEA CCLLAR FOR DOGS

(00059) **** PRODUCT SEARCH LISTING ****

11/29/76 PAGE 2

**CONTINUE REGISTRANT 000C59

00123 PULVEX ZEMA DIP

00127 COOPER HOG MANGE CURE

00139 COOPER TOX EXTRA DUST

00145 PULVEX ANTI-FLEA DOG COLLAR DELUXE MODEL

00146 PULVEX ANTI-FLEA CAT COLLAR

00164 COOPER PRESSURIZED SCREW WORM AND EAR TICK KILLER

00188 SCREW WORM SMEAR

****

REGISTRANT *NAME AND ADDRESS*

* 000070 RIGO COMPANY, INC.
1200 FORT WAYNE NAT'L BANK BLDG.
FORT WAYNE, IN 46802

********** PRODUCT NAME **********

00067 KILL-KO MANGE CURE

00C86 KILL-KO STOCK SPRAY AND DIP

00163 KILL KO LINDANE 20 % CONCENTRATE

00205 KILL-KO TOBACCO TREATER

****

(00148) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 3

****

REGISTRANT *NAME AND ADDRESS*

* 000148 THOMPSON-HAYWARD CHEMICAL COMPANY
BOX 2383
KANSAS CITY KS 66110

********** PRODUCT NAME **********

00106 DE-PESTER BHC E-1

00495 DE-PESTER TOXAPHENE-L STOCK SPRAY AND DIP

00549 DE-PESTER BHC W-12

00848 INSECTICIDE LINDANE POWDER DUSTING 25 LBS

00913 DE-PESTER LIVESTOCK DUST

00967 DE-PESTER LINDANE E-1

01058 T-H 1% LINDANE DUST

****

REGISTRANT *NAME AND ADDRESS*

* 000168 WASATCH CHEMICAL DIVISION ENTRADA INC INC
P O BOX 6219
SALT LAKE CITY UT 84106

********** PRODUCT NAME **********

00092 LINDANE 1% DUST

****

(00226) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 4

****

REGISTRANT *NAME AND ADDRESS*

* 000226 TOBACCO STATES CHEMICAL COMPANY
BOX 479
LEXINGTON KY 40501

********** PRODUCT NAME **********

00038 TOBACCO STATES BRAND *** 10% B-H-C WETTABLE POWDER

00040 TOBACCO STATES BRAND LOUSE AND TICK POWDER CONTAINS LINDANE

00046 TOBACCO STATES BRAND 5% LINDANE TRANSPLANTER SOLUTION

00060 TOBACCO STATES BRAND 10% LINDANE TRANSPLANTER SOLUTION

00068 TOBACCO STATES BRAND 20% LINDANE TRANSPLANTER SOLUTION

00074 TOBACCO STATES BRAND 25% LINDANE WETTABLE POWDER

00135 8-1 CUKE DUST

00149 TOBACCO STATES BRAND TOX 450 DIP-SPRAY CONCENTRATE

00177 TOMAHAWK SUPER X-TERMITE

00196 TOBACCO STATES BRAND ROSE DUST

****

(00228) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 5

****

REGISTRANT *NAME AND ADDRESS*

* 000228 RIVERDALE CHEMICAL COMPANY
220 E 17TH ST
CHICAGO HGTS IL 60411

********** PRODUCT NAME **********

00090 LOWE SEEC CORN TREATER

****

REGISTRANT *NAME AND ADDRESS*

* 000239 CHEVRON CHEMICAL COMPANY
ORTHO DIVISION 940 HENSLEY WAY
RICHMOND CA 94801

********** PRODUCT NAME **********

00154 CRTHO ROSE AND FLOWER DUST

00224 CRTHO BHC 10 WETTABLE

00226 ISOTOX LINDANE 1.5 DUST

00229 ISOTOX LINDANE WETTABLE 25

00232 CRTHO BHC 3 DUST

00353 ISOTOX SEED TREATER (75)

00439 ORTHO BHC EMULSIVE

00518 ORTHO KLEEN STOCK SPRAY

00531 ISOTOX TRANSPLANTER SOLUTION PRODUCT NO. 1469

00559 CHEVRON LINDANE 95

(00239) **** PRODUCT SEARCH LISTING ****

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**CONTINUE REGISTRANT 000239

00677	ISOTOX SEED TREATER (F)
00680	ORTHOCIDE LINDANE 60-15 SEED PROTECTANT
00907	ORTHO ANT & ROACH SPRAY
00917	ORTHO LAWN SPRAY
00996	ORTHO SOIL & BULB DUST
01025	ORTHO ROSE & FLOWER BOMB
01173	LINDANE BORER & LEAF MINER SPRAY
01247	CHEVRON LINDANE TECHNICAL
01607	ORTHO DIBROM LAWN INSECT SPRAY
01761	ORTHO HORNET AND WASP SPRAY
01769	ORTHO CUSTOM MIXTURE NO. 180
02243	ORTHO SUNFLOWER SEED TREATER
02266	ORTHO SOD WEBWORM SPRAY
02363	ISOTOX LINDANE SPRAY NO. 200

****

(00257)

11/29/76

**** PRODUCT SEARCH LISTING ****

FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE

PAGE 7

****

REGISTRANT *NAME AND ADDRESS*

* 000257 FULD-STALFORT INC
1354 OLD POST ROAD
HAVRE DE GRACE MD 21078

********** PRODUCT NAME **********

00125 PEST OFF SHAMPOO

****

REGISTRANT *NAME AND ADDRESS*

* 000270 FARNAM COMPANIES INC
P O BOX 21447
PHOENIX, AZ 85036

********** PRODUCT NAME **********

00018 FARNAM TOXANOX * PLUS

00063 FARNAM SCREW WORM EAR TICK BOMB II

00102 FARNAM MANGE X

****

(00279) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 8

****

REGISTRANT *NAME AND ADDRESS*

* 000279 FMC CORP.
AGRICULTURAL CHEM DIV.
100 NIAGARA ST.
MIDDLE PORT NY 14105

********** PRODUCT NAME **********

00277 NIAGARA LINDANE 1 DUST (CODE 33)

00467 NIAGARA LINDANE 25 SPRAY

00556 NIAGARA BHC 10 SPRAY

00868 NIAGARA LINDANE 20 MISCIBLE

02148 NIAGARA LINDANE 75 SPRAY

02528 NIAGARA LINDANE

****

REGISTRANT *NAME AND ADDRESS*

* 000299 MARTIN C J COMPANY
606 W MAIN PO BOX 1089
NACOGDOCHES TX 75961

********** PRODUCT NAME **********

00077 MARTIN'S SUPER STOCK TOX

00118 BEEF CATTLE DUST

00149 MARTIN'S 6% LINDANE WETTABLE POWDER

00165 MARTIN'S BOMBANE JET STREAM

00168 MARTINS US-EQ 335 SCREW WORM REMEDY FOR HORSES & MULES

(00299) **** PRODUCT SEARCH LISTING ****

11/29/76 PAGE 9

**CONTINUE REGISTRANT 000299

00173 MARTIN'S BORER & BEERLE KILLER/PINE & HARDWOOD TREES

00184 MARTIN'S LINDANE CONCENTRATE EMULSIFIABLE

****

REGISTRANT *NAME AND ADDRESS*

* 000327 TEXAS PHENOTHIAZINE COMPANY
BOX 4186
FT WORTH TX 76106

********** PRODUCT NAME **********

00062 TPC TOX-A-DANE

00132 TPC EZ-12 IMPROVED LINDANE CONCENT. (CONT 10% GAMMA ISOMER)

00136 TPC SCREWWORM SMEAR EQ-335

****

REGISTRANT *NAME AND ADDRESS*

* 000343 CASTLE CHEMICAL COMPANY
301 MASTER AVE
SAVAGE MN 55378

********** PRODUCT NAME **********

00020 CASTLE COVER-UP-PLUS

****

(00358) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 10

****

REGISTRANT *NAME AND ADDRESS*

* 000358 NOTT MANUFACTURING COMPANY INC
PLEASANT VALLEY NY 12569

********** PRODUCT NAME **********

00097 LINDANE 20% CONCENTRATE BORER SPRAY

00116 BORER-NOT

00143 NOTT'S BULB SAVER

****

REGISTRANT *NAME AND ADDRESS*

* 000370 GARDEN HOUSE SPRAY COMPANY
PO BOX 459 RT 107
LACONIA NH 03246

********** PRODUCT NAME **********

00012 ARNOLD 18% LINDANE SPRAY CARTRIDGE

****

(00373) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 11

****

REGISTRANT *NAME AND ADDRESS*

* 000373 RESIDEX CORP
225 TERMINAL AVENUE
CLARK NJ 07066

********** PRODUCT NAME **********

00048 RESIDEX LINDANE 20% EMULSIFIABLE

****

REGISTRANT *NAME AND ADDRESS*

* 000395 LETHELIN PRODS COMPANY INC
15 MACQUESTEN PARKWAY SO
MOUNT VERNON NY 10550

********** PRODUCT NAME **********

00002 BORERKIL

****

REGISTRANT *NAME AND ADDRESS*

* 000402 HILL MANUFACTURING COMPANY
1500 JONESBORO RD SE
ATLANTA GA 30315

********** PRODUCT NAME **********

00012 HILL'S PROTECTO-WAX

00101 HILL BEE,WASP, HORNET, YELLOW JACKET, JET STREAM KILLER

****

(00407) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 12

****

REGISTRANT *NAME AND ADDRESS*

* 000407 IMPERIAL INC
BOX 423
SHENANDOAH IA 51601

********** PRODUCT NAME **********

00295 IMPERIAL GLADIOLUS DUST FOR INSECT & DISEASE CONTROL

00309 IMPERIAL STOCK-TOX TWO (LIVESTOCK SPRAY CONCENTRATE)

****

REGISTRANT *NAME AND ADDRESS*

* 000410 FRANKLIN LABORATORIES INC
PO BOX 22335-WELLSHIRE STATION
DENVER CO 80222

********** PRODUCT NAME **********

00002 FRANKLIN SPINOSE EAR TICK TREATMENT WITH LINDANE

00033 FRANKLIN LINDANE 20

00044 FRANKLIN TOXAPHENE LINDANE SPRAY MIX

00067 FRANKLIN EAR TICK SCREWWORM BOMB

****

(00411) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 13

****

REGISTRANT *NAME AND ADDRESS*

* 000411 JENSEN-SALSBERY LAB DIV OF RICHARDSON-MERRELL INC
520 W 21ST STREET
KANSAS CITY MO 64141

********** PRODUCT NAME **********

00057 GAMMEX

00066 THIONIUM SHAMPOO WITH LINDANE

****

REGISTRANT *NAME AND ADDRESS*

* 000430 DURHAMS DRUG PRODUCTS COMPANY
BOX 443
COMANCHE TX 76442

********** PRODUCT NAME **********

00023 DURHAM'S BHC W-6

****

(00436) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 14

****

REGISTRANT *NAME AND ADDRESS*

* 000436 STANDARD CHEMICAL MFG COMPANY
701 S 42ND ST
OMAHA, NB 68103

********** PRODUCT NAME **********

00017 STANDARD'S LIN-TOX LIVESTOCK SPRAY AND DIP

****

REGISTRANT *NAME AND ADDRESS*

* 000449 TECHNE CORP. C/C FARMLAND IND., INC.
AGRICULTURAL CHEMICALS DIV.
P. O. BOX 7305
KANSAS CITY, MO. 64116

********** PRODUCT NAME **********

00001 SURE DEATH BRAND LINDANE 25% WP INSECTICIDE AND SEED TREATMENT

00039 SURE DEATH BRAND LINDANE 1-E

00249 TOXALIN

00500 SURE DEATH BRAND LINDANE 1 DUST

****

(00450) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 15

****

REGISTRANT *NAME AND ADDRESS*

* 000450 MILLER CHEMICAL COMPANY INC
1441 CALIFORNIA ST
OMAHA NE 68102

********** PRODUCT NAME **********

00133 MILLER STOX-SPRAY CONCENTRATE

****

REGISTRANT *NAME AND ADDRESS*

* 000453 WOOD TREATING CHEMICALS DEPT
KOPPERS CO INC
DEPT. KOPPERS CO. 5137 SOUTHWEST AVE.
ST LOUIS MO 63110

********** PRODUCT NAME **********

00115 TIMBERTREAT NO. 625 INSECTICIDE

00260 TIMBERTREAT 95 INSECTICIDE

****

(00456)

**** PRODUCT SEARCH LISTING ****

11/29/76

FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE

PAGE 16

****

REGISTRANT *NAME AND ADDRESS*

* 00C456 CHEMICAL FORMULATORS INC
BOX 26
NITRO, WV 25143

********** PRODUCT NAME **********

00076 CHEMFORM BRAND ANTI-BORER EMULSION CONCENTRATE

C0090 CHEMFORM BRAND ROSE DUST

****

REGISTRANT *NAME AND ADDRESS*

* 000471 FIELD HENRY SEED & NURSERY
407 SYCAMORE ST
SHENANDOAH IA 51601

********** PRODUCT NAME **********

00009 HENRY FIELD S GLADIOLUS AND BULB DUST FUNGICIDE INSECTICIDE

****

(00476) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 17

****

REGISTRANT *NAME AND ADDRESS*

* 000476 STAUFFER CHEMICAL COMPANY LABELING & REGISTRATION
DEPT 1200 SOUTH 47TH ST
RICHMOND, CA 94804

********** PRODUCT NAME **********

00295 LINDANE 1.7-E

00418 STAUFFER LINCANE 75 SEED PROTECTANT

01612 LINDANE 1-EH

01913 LINDANE TOXAPHENE .2-4E LIVESTOCK SPRAY AND OILER CONCENTRATE

02036 CAPTAN-LINDANE 12.5-25 SEED PROTECTANT

02115 CAPTAN-DIAZINON-LINDANE 33.K-11-16.6 SEED PROTECTAN

02144 LINDANE 75 DUST BASE

****

REGISTRANT *NAME AND ADDRESS*

* 000491 SELIG CHEMICAL INDUSTRIES THE
DIV NATIONAL SERVICE INDS INC PO BOX 43106
ATLANTA GA 30336

********** PRODUCT NAME **********

00187 SNIPER RESIDUAL INSECTICIDE

****

(00495) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 18

****

REGISTRANT *NAME AND ADDRESS*

* 000495 CONTINENTAL CHEMISTE CORPORATION
ATTN CHAMLIN G R 2256 W OGDEN AVE
CHICAGO IL 60612

********** PRODUCT NAME **********

00004 METHOXLIN INSECT SPRAY

00006 LINDANE SMO CLOUD BUG KILLER

00007 BUG-TAB

00008 MOTH CLOUD

****

REGISTRANT *NAME AND ADDRESS*

* 000523 ROBERTS LAB DIV HOPKINS AGR CHEM
4995 N MAIN ST
ROCKFORD IL 61101

********** PRODUCT NAME **********

00019 DR. ROBERTS HOG MANGE POWDER

00044 LINDANE EMULSIFIABLE CONCENTRATE

****

(00541) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 19

****

REGISTRANT *NAME AND ADDRESS*

* 000541 PURITAN CHEM COMPANY
PO BOX 93247 MARTECH STATION
ATLANTA GA 30318

********** PRODUCT NAME **********

00186 OVER & OUT GENERAL PURPOSE INDOOR INSECTICIDE

****

REGISTRANT *NAME AND ADDRESS*

* 000550 VAN WATERS & ROGERS INC BRAUN KNECTH HEIMANN DIV
BOX 3200
SAN FRANCISCO CA 94119

********** PRODUCT NAME **********

00105 MACLEAN'S LINDANE-13% EMULSIFIABLE

00107 NAMCO CHLORDANE 72% EMULSIFIABLE

00110 NAMCO LINDANE CRYSTALS

00112 MACLEAN'S 20% LINDANE (IN OIL)

00113 MACLEAN'S LINDANE 20-E

****

(00551) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 20

****

REGISTRANT *NAME AND ADDRESS*

* 000551 BAIRD & MCGUIRE INC
SOUTH ST
HOLBROOK MA 02343

********** PRODUCT NAME **********

00221 20% LINDANE EMULSIFIABLE CONCENTRATE

00234 12% LINDANE EMULSIFIABLE CONCENTRATE

****

REGISTRANT *NAME AND ADDRESS*

* 000554 AGSCO INC
BOX 458
GRAND FORKS ND 58201

********** PRODUCT NAME **********

00109 AGSCO DB-GREEN-A

00127 AGSCO DB-GREEN A SEED DISINFECTANT AND INSECTICIDE

****

(00572)

**** PRODUCT SEARCH LISTING ****

11/29/76

FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE

*PAGE 21

REGISTRANT *NAME AND ADDRESS*

* 000572 ROCKLAND CHEMICAL COMPANY, INC.
P. O. BOX 809
CALDWELL, NJ 07006

********** PRODUCT NAME **********

00227 ROCKLAND HOME OWNER GARDEN SPRAY

REGISTRANT *NAME AND ADDRESS*

* 000602 RALSTON PURINA COMPANY
CHECKERBOARD SQUARE
ST LOUIS MO 63188

********** PRODUCT NAME **********

00007 PURINA INSECT KILLER

00037 PURINA LIQUID STOCK SPRAY

00039 PURINA MANGE CONTROL

00044 PURINA RANGE CATTLE SPRAY

00118 PURINA BACK SCRATCH TOXAPHENE LINDANE CONCENTRATE

00155 PURINA ROSE & FLOWER GARDEN SPRAY A W P FOR CNTR OF INS & PLANT DI

(00603) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 22

****

REGISTRANT *NAME AND ADDRESS*

* 000603 CHEMTECH IND INC
3033 GLENFIELD, PO BOX 24440
DALLAS, TX 75224

********** PRODUCT NAME **********

00039 DIXIE FOOD PLANT RESIDUAL SPRAY

****

REGISTRANT *NAME AND ADDRESS*

* 000606 CORN KING DIVISION THE
KING CASTLE INC PO BOX 189
MARION IA 52302

********** PRODUCT NAME **********

00079 CORN KING LIVESTOCK MANGE & LICE LIQUID

00095 HUBBARD PREMIUM STOCK SPRAY

****

(00607) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 23

****

REGISTRANT *NAME AND ADDRESS*

* 000607 CARBOLA CHEMICAL COMPANY INC
NATURAL BRIDGE, NY 13665

********** PRODUCT NAME **********

00040 CARBOLA SPECIAL HOG DUSTING POWDER

****

REGISTRANT *NAME AND ADDRESS*

* 000615 BAKER MOORE & MEIN CO
19 N RAILROAD ST
MYERSTOWN PA 17067

********** PRODUCT NAME **********

00018 BAY-MOR BHC ROOST PAINT

****

REGISTRANT *NAME AND ADDRESS*

* 000616 WINNER CHEMICAL INC.
FRENCH PLAZA SUITE 3
FRENCH TOWN ROAD
NEW CASTLE, DE 19720

********** PRODUCT NAME **********

00009 INSECTICIDE, LINDANE, POWDER, DUSTING

****

(00622) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 24

****

REGISTRANT *NAME AND ADDRESS*

* 000622 NORDEN LABS INC
601 W CORNHUSKER
LINCOLN NE 68521

********** PRODUCT NAME **********

00011 CANOLENE

00031 LINSPRAY (CONTAINS LINDANE)

****

REGISTRANT *NAME AND ADDRESS*

* 000635 E-Z-FLO CHEMICAL COMPANY DIV OF KIRSTO COMPANY
P O BOX 808
LANSING MI 48903

********** PRODUCT NAME **********

00265 E-Z-FLO 10% LINDANE TRANSPLANTER SOLUTION

00378 BHC 12-W

00402 LINDANE 25 W

00662 E-Z FLO LINDANE 1.7E

****

(00642) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 25

****

REGISTRANT *NAME AND ADDRESS*

* 000642 THOMPSON CHEMICALS CORP
23529 S FIGUEROA ST
WILMINGTON CA 90744

********** PRODUCT NAME **********

00103 THOMPSON'S MULTI-TOX TL LIVESTOCK SPRAY & DIP

****

REGISTRANT *NAME AND ADDRESS*

* 000655 PRENTISS DRUG & CHEMICAL COMPANY INC
363 7TH AVE
NEW YORK NY 10001

********** PRODUCT NAME **********

00021 PRENTOX 25% LINDANE WETTABLE POWDER

00022 PRENTOX 20% LINDANE EMULSIFIABLE CONCENTRATE

00023 PRENTOX LINDANE DUST BASE 25% LINDANE

00028 PRENTOX LINDANE TECHNICAL POWDER

00039 PRENTOX 20% LINDANE OIL-SOLUBLE CONCENTRATE

00044 PRENTOX 10% LINDANE EMULSIFIABLE CONCENTRATE

00045 PRENTOX 10% LINDANE OIL SOLUBLE CONCENTRATE

00055 PRENTOX 95% LINDANE POWDER

00393 PRENTOX LINDANE TECHNICAL CRYSTALS

****

(00682) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 26

****

REGISTRANT *NAME AND ADDRESS*

* 000682 WOODS INDUSTRIES
DBA-CORP KING CHEMICAL
P O BOX 1016
YAKIMA WA 98907

********** PRODUCT NAME **********

00026 CROP KING COLLOIDAL LINDANE 40%

****

REGISTRANT *NAME AND ADDRESS*

* 000706 CLAIRE MFG COMPANY
7620 28 S HARVARD AVE
CHICAGO IL 60620

********** PRODUCT NAME **********

00035 CLAIRE BEE WASP HORNET YELLOW JACKET JET STREAM KILLER

****

REGISTRANT *NAME AND ADDRESS*

* 000728 PEARSON & COMPANY
PO BOX 7151
MOBILE AL 36601

********** PRODUCT NAME **********

00070 PEARSONS BORER SPRAY & STOCK DIP

00086 PEARSONS ROSE DUST

****

(00746) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 27

****

REGISTRANT *NAME AND ADDRESS*

* 000746 MFA OIL CO
P.O. BOX 519
COLUMBIA MO 65201

********** PRODUCT NAME **********

00087 M. F. A. 25% LINDANE

00110 M.F.A. ROSE AND FLORAL DUST

****

REGISTRANT *NAME AND ADDRESS*

* 000769 WOODFOLK CHEMICAL WORKS INC
PO BOX 938
FT VALLEY GA 31030

********** PRODUCT NAME **********

00050 SECURITY BRAND BENZEX

00155 SECURITY BRAND 25% LINDANE WETTABLE

00159 SECURITY BRAND 20% LINDANE EMULSIFIABLE CONCENTRATE

00168 SECURITY BRAND 1% LINDANE DUST

00209 SECURITY BRAND BHC CONCENTRATE

00299 ROSE . FLOWER ORNAMENTAL DUST

****

(00798) **** PRODUCT SEARCH LISTING **** PAGE 28

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE

****

REGISTRANT *NAME AND ADDRESS*

* 000798 WILSON A
975 BALL AVE
UNION NJ 07083

********** PRODUCT NAME **********

00078 WILSON'S SUPER-THION

****

REGISTRANT *NAME AND ADDRESS*

* 000802 LILLY CHAS H COMPANY MILLER RD DIV
7737 N.E. KILLINGSWORTH
PORTLAND, OR 97218

********** PRODUCT NAME **********

00076 MILLER'S LINDANE 25W (25% LINDANE WETTABLE POWDER)

00081 MILLERS LINDANO 75W (75% LINDANE, WETABLE POWDER) SEED TREATER

00112 MILLER'S PESTKIL

00433 MILLER ROSE AND FLOWER SPRAY

****

(00829) **** PRODUCT SEARCH LISTING **** PAGE 29

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE

****

REGISTRANT *NAME ANC ADDRESS*

* 000829 SOUTHERN AGRI INSECT INC
PO BOX 218
PALMETTO FL 33561

********** PRODUCT NAME **********

00191 SA BRAND 50 25% LINDANE WETTABLE SPRAY CONCENTRATE

00221 SA-50 BRAND BHC SPRAY CONCENTRATE

****

REGISTRANT *NAME AND ADDRESS*

* 000854 MEYER INC THEODORE
922 CALLOWHILL ST
PHILADELPHIA PA 19123

********** PRODUCT NAME **********

00009 MEYER'S LINDANE SPRAY

****

(00869)

**** PRODUCT SEARCH LISTING ****

11/29/76

FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE

PAGE 30

****

REGISTRANT *NAME AND ADDRESS*

* 000869 GREEN LIGHT COMPANY
PO BOX 16192
SAN ANTONIO TX 78246

********** PRODUCT NAME **********

00132 GREEN LIGHT BORER KILLER

****

REGISTRANT *NAME AND ADDRESS*

* 000871 THE DOGGETT CORPORATION
LEBANON NJ 08833

********** PRODUCT NAME **********

00088 FISONS QUADRI SPRAY

****

REGISTRANT *NAME AND ADDRESS*

* 000904 PRATT B G
DIV GABRIEL CHEM LTD 204 21ST AVE
PATERSON NJ 07905

********** PRODUCT NAME **********

00169 202K SHADE TREE INSECT SPRAY

00173 PRATT'S LAWN INSECT SPRAY FOR CHINCH BUGS

(00904) **** PRODUCT SEARCH LISTING ****

11/29/76 PAGE 31

**CONTINUE REGISTRANT 000904

00182 PRATT MINER & BORER SPRAY (NEW FORMULA)

00185 PRATT BORER SPRAY

00215 PRATT 5% LANDANE BORER SPRAY

****

REGISTRANT *NAME AND ADDRESS*

* 000908 CAPITOL CHEMICAL COMPANY
5455 BUTLER RD
WASHINGTON DC 20016

********** PRODUCT NAME **********

00031 CAPITOL INSECTICIDE DUSTING POWDER

****

REGISTRANT *NAME AND ADDRESS*

* 000909 COOKE LABORATORY PRODUCTS
4759 S DURFEE AVE
PICO RIVERA CA 90660

********** PRODUCT NAME **********

00064 COOKE ROSE DUST

00067 COOKE BUG SHOT LAWN SPECIAL SPRAY CONCENTRATE

****

(00912) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 32

****

REGISTRANT *NAME AND ADDRESS*

* 000912 FARMERS UNION CENTRAL EXCHANGE INC
POST OFFICE BOX "G"
ST PAUL MN 55165

********** PRODUCT NAME **********

00056 CO-OP STOCK TOX PLUS LIVESTOCK SPRAY CONCENTRATE

****

REGISTRANT *NAME AND ADDRESS*

* 000935 HOOKER CHEMICAL & PLASTICS CORP
P O BOX 344
NIAGARA FALLS, NY 14302

********** PRODUCT NAME **********

00017 LINDANE (HGI)

****

REGISTRANT *NAME AND ADDRESS*

* 000962 LOS ANGELES CHEMICAL COMPANY
4545 ARDINE ST
SOUTH GATE CA 90280

********** PRODUCT NAME **********

00350 LACCO LIN O MULSION 1.7

00366 MACCO HI-LIN

(00962) **** PRODUCT SEARCH LISTING ****

PAGE 33

11/29/76

**CONTINUE REGISTRANT 000962

00375 LACCO LIN-O-FLY

00376 LACCO LIN-O-SOL 20

****

REGISTRANT *NAME AND ADDRESS*

* 000984 WHITMOYER LAB INC
19 NORTH RAILROAD ST
MYERSTOWN PA 17067

********** PRODUCT NAME **********

00045 AFFILIATED SCREW WORM MEDICATION

00051 WHITMOYER SCREW WORM MEDICATION

****

REGISTRANT *NAME AND ADDRESS*

* 001007 PFIZER INC.
235 EAST 42ND ST
NEW YORK NY 10017

********** PRODUCT NAME **********

00045 PFIZER LINDANE COMPOUND

****

(01019) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 34

****

REGISTRANT *NAME AND ADDRESS*

* 001019 LEGEAR DIVISION
O'NEAL JONES & FELDMAN INC 1304 ASHBY RD
ST LOUIS MO 63132

********** PRODUCT NAME **********

00009 DR. LEGEAR'S FLEA AND TICK POWER FOR DOGS"

00030 LEGEAR MANGE CURE

****

REGISTRANT *NAME AND ADDRESS*

* 001021 MCLAUGHLIN GORMLEY KING COMPANY
8810 10TH AVE NO
MINNEAPOLIS MN 55427

********** PRODUCT NAME **********

00846 PYROCIDE INTERMEDIATE NO. 6668

00934 PYROCIDE PLANT SPRAY 6743

00992 PYROCIDE PLANT SPRAY 6883

00998 PYROCIDE PLANT CONCENTRATE 6888

****

(01022) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 35

****

REGISTRANT *NAME AND ADDRESS*

* 001022 CHAPMAN CHEMICAL COMPANY
BOX 9158
MEMPHIS TN 38109

********** PRODUCT NAME **********

00477 AMBRITE T

****

REGISTRANT *NAME AND ADDRESS*

* 001029 AIDEX CORPORATION
P.O. BOX 7348
OMAHA, NB 68107

********** PRODUCT NAME **********

00049 OUR OWN INSECTICIDE

00059 TOX-LIN EMULSIBLE CONCENTRATE

00067 MIRASECT READY MIXED NON STAINING GENERAL PURPOSE INSECTICIDE

00086 MANGEX FOR HOGS,CATTLE,SHEEP ANDGOATS

****

(01111) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 36

****

REGISTRANT *NAME AND ADDRESS*

* 001111 HOCKWALCCHEM DIV OXFORC CHEM
275 VALLEY DR
BRISBANE CA 94005

********** PRODUCT NAME **********

00145 MALINEX RESIDUAL FLY SPRAY

****

REGISTRANT *NAME AND ADDRESS*

* 001117 FORT DODGE LABORATORIES
DIV AMER HOME PRODS CORP BOX 518
FORT DODGE IA 50501

********** PRODUCT NAME **********

00024 MYZIN SMEAR (EQ335) FOR CONTROL OF SCREWWORMS IN HORSES

00031 MALINGO

****

(01145) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 37

****

REGISTRANT *NAME AND ADDRESS*

* 001145 AMOCO OIL CO.
200 E. RANDOLPH DR.
CHICAGO IL 60601

********** PRODUCT NAME **********

00121 BOVINOL T-L44 FOR BEEF CATTLE HOGS-SHEEP-GOATS BUILDINGS

****

REGISTRANT *NAME AND ADDRESS*

* 001157 MOORMAN MFG COMPANY
1000 NORTH 30TH STREET
QUINCY, IL 62301

********** PRODUCT NAME **********

00009 MOORMAN'S MOORMAFUME

****

REGISTRANT *NAME AND ADDRESS*

* 001159 SEACOAST LABORATORIES INC
257 HIGHWAY 18
E BRUNSWICK NJ 08816

********** PRODUCT NAME **********

00079 TWIN LIGHT LINDANE 25% WETTABLE POWDER

00152 TWIN LIGHT LINDANE 20% SPRAY

****

**** PRODUCT SEARCH LISTING ****

(01191) PAGE 38

FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE

11/29/76

****

REGISTRANT *NAME AND ADDRESS*

* 001191 CAROLINA CHEMICALS INC
PO BOX 118
W COLUMBIA SC 29169

********** PRODUCT NAME **********

00317 FLIGHT BRAND BHC PINE TREE SPRAY

****

REGISTRANT *NAME AND ADDRESS*

* 001193 707 COMPANY
1530 STILLWELL AVE
BRONX NY 10461

********** PRODUCT NAME **********

00059 707 WASP, HORNET & BEE KILLER

****

REGISTRANT *NAME AND ADDRESS*

* 001202 PUREGRO COMPANY
1052 W 6TH ST
LOS ANGELES CA 90017

********** PRODUCT NAME **********

00197 PUREGRO KARATHANE LINDANE DUST 1-1

****

(01222) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 39

****

REGISTRANT *NAME AND ADDRESS*

* 001222 INDIANA FARM BUREAU COOP ASSN INC
47 SO PENNSYLVANIA ST
INDIANAPOLIS IN 46204

********** PRODUCT NAME **********

00057 CO-OP DUST NO. 17 CONTAINING 1% LINDANE

****

REGISTRANT *NAME AND ADDRESS*

* 001266 MALTER INTERNATIONAL CORPORATION
PO BOX 6099
NEW ORLEANS LA 70114

********** PRODUCT NAME **********

00076 MALTER INTERNATIONAL OUT-CIDE

****

REGISTRANT *NAME AND ADDRESS*

* 001304 FURST MCNESS COMPANY
120 E CLARK ST
FREEPORT IL 61032

********** PRODUCT NAME **********

00053 MCNESS MANGE OIL CONCENTRATE

****

(01307) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 40

****

REGISTRANT *NAME AND ADDRESS*

* 001307 MAGNOLIA CHEMICAL CO INC
2646 RODNEY LANE
DALLAS TX 75220

********** PRODUCT NAME **********

00099 MAGNA-TOX SUPER #150

****

REGISTRANT *NAME AND ADDRESS*

* 001327 FULLER SYSTEM INC
226 WASHINGTON ST
WOBURN MA 01801

********** PRODUCT NAME **********

00015 FULEX APHID-SMOKE FUMIGATOR

00016 FULEX APHID-SMOKE FUMIGATOR NO 1M2M

00027 FULEX APHID SMOKE FUMIGATOR NO. 10M

00028 FULEX APHID SMOKE FUMIGATOR NO. 20M

****

**** PRODUCT SEARCH LISTING ****

(01348) PAGE 41

FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE

11/29/76

****

REGISTRANT *NAME AND ADDRESS*

* C01348 SELCO SUPPLY COMPANY
COLLINS AVE & R R
EATON CO 80615

********** PRODUCT NAME **********

00074 SELCO BRAND LINDANE 75% WETTABLE POWDER

00093 SELCO LINDANE-25%-WETTABLE

00108 SELCO SELCOTOX LIVESTOCK SPRAY TOXAPHENE AND LINDANE

00114 SELCO LINDANE EMULSIFIABLE

****

REGISTRANT *NAME AND ADDRESS*

* 001381 LAND O'LAKES C/O IMPERIAL INC
PO BOX 423
SHENANDOAH IA 51601

********** PRODUCT NAME **********

00068 FELCO/STATEX STOCK-TOX PLUS (LIVESTOCK SPRAY CONCENTRATE)

****

(01386)

**** PRODUCT SEARCH LISTING ****

11/29/76

FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE

PAGE 42

****

REGISTRANT *NAME AND ADDRESS*

* 001386 UNIVERSAL COOPERATIVES INC
PO BOX 836
ALLIANCE OH 44601

********** PRODUCT NAME **********

00027 12% GAMMA BHC WETTABLE POWDER

00032 UNICO BHC EMULSIFIABLE CONCENTRATE

00045 UNICO LINDANE EMULSIFIABLE CONCENTRATE

00054 LINDANE WETTABLE POWDER

00073 UNICO ROSE AND FLORAL SPRAY POWDER

00323 UNICO ROSE AND FLORAL DUST

****

REGISTRANT *NAME AND ADDRESS*

* 001439 BLUE SPRUCE COMPANY
1390 VALLEY ROAD
STIRLING, NJ 07980

********** PRODUCT NAME **********

00055 CHEM-LIN 10% SOLUTION

00110 OUTDOOR FOG FORMULA NO. 55

00128 CHEM SECT SPRAY NB #1

****

(01452) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 43

****

REGISTRANT *NAME AND ADDRESS*

* 001452 HILO PRODUCTS DIV NIP CO MAN INC
P O BOX 368
GLENFORD, NY 12433

********** PRODUCT NAME **********

00002 HILO KILTIX

****

REGISTRANT *NAME AND ADDRESS*

* 001516 CURTS LABORATORIES INC
812 WOODSWETHER ROAD
KANSAS CITY MO 64105

********** PRODUCT NAME **********

00039 FLEADANE SHAMPOO

00056 SQUERM-JET

00057 SMEAREX 367

****

(01528) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 44

****

REGISTRANT *NAME AND ADDRESS*

* 001528 SHEPARD LABS
DIV OF NEBRASKA PRODUCING & REFINING
1521 NO 11TH STREET
OMAHA, NB 68110

********** PRODUCT NAME **********

00010 SHEPS TOXAPHENE LINDANE EMULSIFIABLE CONCENTRATE STOCK SPRAY & DIP

****

REGISTRANT *NAME AND ADDRESS*

* 001553 MOMAR INC
PO BOX 19567 STATION N
ATLANTA GA 30325

********** PRODUCT NAME **********

00068 MOMAR SUPER-FOG INSECTICIDE CONCENTRATE

****

REGISTRANT *NAME AND ADDRESS*

* 001598 FOX INC
P O BOX 2419
RALEIGH, NC 27642

********** PRODUCT NAME **********

00110 SPECIAL BHC PINE TREE SPRAY CONCENTRATE

00115 1% LINDANE DUST

****

(01645)

11/29/76

**** PRODUCT SEARCH LISTING ****

FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE

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****

REGISTRANT *NAME AND ADDRESS*

* 001645 KNOX CHEMICAL COMPANY
900 N FRANKLIN ST
CHICAGO, IL 60610

********** PRODUCT NAME **********

00021 KNOX RESIDUAL INSECTICIDE B

00041 STOKELY-VAN CAMP FORMULA NO. 999

00042 KNOX FORMULA "M-M-L"

00051 KNOX FORMULA NO. 999 SPECIAL

00055 KNOX FORMULA D M L

****

REGISTRANT *NAME AND ADDRESS*

* 001691 CHEMICAL COMPOUNDING CORP
680 ELTON AVENUE
RIVERHEAD, NY 11901

********** PRODUCT NAME **********

00108 INSECT, LINDANE, POWDER, D 25 POUNDS MIL SPEC MIL-I-11490

****

(01737) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 46

****

REGISTRANT *NAME AND ADDRESS*

* 001737 SOUTHWEST GREASE & OIL CO (OMAHA) INC
20TH & WILLIAMS STS
OMAHA, NB 68108

********** PRODUCT NAME **********

00007 ARCHER HOG OIL WITH LINDANE

****

REGISTRANT *NAME AND ADDRESS*

* 001767 PARROTT CHEMICAL COMPANY
SUNNYSIDE & SOUTHFIELD AVE
STAMFORD CT 06902

********** PRODUCT NAME **********

00069 LUCKY STRIKE INSECTICIDE 20% LINDANE EMULS CONC BORER SPRAY

****

REGISTRANT *NAME AND ADDRESS*

* 001783 TRIO CHEMICAL WORKS INC
341-347 SCHOLES ST
BROOKLYN NY 11200

********** PRODUCT NAME **********

00029 TRIO LINDANE

****

(01812) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 47

****

REGISTRANT *NAME AND ADDRESS*

* 001812 PARRAMORE & GRIFFIN COMPANY
POST OFFICE BOX 188
VALDOSTA GA 31601

********** PRODUCT NAME **********

00096 BHC EMULSIFIABLE CONCENTRATE

****

REGISTRANT *NAME AND ADDRESS*

* 001842 TRIANGLE CHEMICAL COMPANY
BOX 4528
MACON GA 31208

********** PRODUCT NAME **********

00035 TRIANGLE 12 GAMMA WETTABLE BBC

00038 TRIANGLE PINE BEETLE SPRAY

00040 TRIANGLE 20% LINDANE EMULSIFIABLE CONCENTRATE

00089 TRIANGLE PINE BEETLE SPRAY OIL CONCENTRATE

00163 TRIANGLE DIE-TERMITE (WITH ALDRIN)

****

**** PRODUCT SEARCH LISTING ****

(01871) PAGE 48

FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE

11/29/76

****

REGISTRANT *NAME AND ADDRESS*

* 001871 FARMCRAFT, INC
8900 S W COMMERCIAL
TIGARD OR 97223

********** PRODUCT NAME **********

00074 FARMCRAFT LINDANE 2 EC

****

REGISTRANT *NAME AND ADDRESS*

* 001926 NAVY BRANC MFG COMPANY
5111 SW AVE
ST LOUIS MO 63110

********** PRODUCT NAME **********

00027 NAVY BRAND BAKERY RESIDUAL

****

REGISTRANT *NAME AND ADDRESS*

* 001927 TERMINIX DIV OF COOK IND INC
PO BOX 16902
MEMPHIS TN 38116

********** PRODUCT NAME **********

00008 TERMINIX BTL

00012 TERMINIX SF

****

(01969) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 49

****

REGISTRANT *NAME AND ADDRESS*

* 001969 PARSONS CHEMICAL
BOX 146
GRAND LEDGE MI 48837

********** PRODUCT NAME **********

00074 PARSONS LINDANE EMULSIFIABLE CONCENTRATE FOR BEEF CATTLE INSECTICIDE SPR

00C97 PARSONS SEED CORN PROTECTANT INSECTICIDE

****

REGISTRANT *NAME AND ADDRESS*

* 001990 FARMLAND INDUSTRIES, INC.
C/O AGRICULTURAL CHEM., DIV.
BOX 20 P.O. BOX 7305
KANSAS CITY, MO 64116

********** PRODUCT NAME **********

00008 LINDANE 25% W-P

00346 CO-OP STOCK-TOX PLUS LINDANE

00355 CO-OP LINDANE EMULSION

****

(02006)

**** PRODUCT SEARCH LISTING ****

11/29/76

FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE

PAGE 50

****

REGISTRANT *NAME AND ADDRESS*

* 002006 GOOD-WAY INSECTICIDE INC
3613 N BUFFALO GROVE RD
ARLINGTON HEIGHTS, IL 60004

********** PRODUCT NAME **********

00042 GOOD-WAY WASP KILLER

****

REGISTRANT *NAME AND ADDRESS*

* 002011 VIGORTONE PROD INC
ATTN A D SWARZENTRUBER
931 BLAIRS FERRY RD NE
CEDAR RAPIDS, IA 52406

********** PRODUCT NAME **********

00004 NO. 121 DRY INSECTICIDE

****

REGISTRANT *NAME AND ADDRESS*

* 002097 BEECHAM-MASSENGILL PHARMACEUTICALS
513-529 5TH ST
BRISTOL TN 37620

********** PRODUCT NAME **********

00004 EMULSION VETERINARY BENZYL BENZOATE WITH LINDANE

00006 MYCODEX PET SHAMPOO WITH LINDANE

(02097) **** PRODUCT SEARCH LISTING ****

11/29/76 PAGE 51

**CONTINUE REGISTRANT 002097

00007 MYCODEX PET SHAMPOO WITH LINDANE 0.3%

****

REGISTRANT *NAME AND ADDRESS*

* 002124 GRACE W R & COMPANY AGR CHEM C H TIDWELL
PO BOX 277 100 N MAIN ST
MEMPHIS TN 38101

********** PRODUCT NAME **********

00541 MAXWELL TOBACCO TRANSPLANT LIQUID

00562 MAXWELL 1% LINDANE DUST

00599 NACO LINDANE-MANEB-SULPHUR DUST &QUASH SPECIAL

00604 NACO LINDANE MANEB DUST (CUCUMBER SPECIAL)

****

REGISTRANT *NAME AND ADDRESS*

* 002131 FRENCH CO THE RT
1 MUSTARD ST
ROCHESTER NY 14609

********** PRODUCT NAME **********

00005 FRENCH'S FLEA COLLAR (FOR DOGS)

00006 FRENCH'S FLEA COLLAR (FOR CATS)

****

**** PRODUCT SEARCH LISTING ****

(02136) PAGE 52

FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE

11/29/76

****

REGISTRANT *NAME AND ADDRESS*

* 002136 HOFFMAN COMPANY INC
1413-1415 COURT ST LAB
ALLENTOWN PA 18102

********** PRODUCT NAME **********

00016 HOFFMAN'S LOUSE AND MANGE SPRAY

****

REGISTRANT *NAME AND ADDRESS*

* 002169 PATTERSON CHEMICAL COMPANY INC
1400 UNION AVE
KANSAS CITY, MO 64101

********** PRODUCT NAME **********

00060 PATTERSON'S 1% LINDANE DUST

00087 PATTERSON'S BHC EMULSION CONCENTRATE

00110 PATTERSON'S 20% LINDANE EMULSIFIABLE CONCENTRATE

00113 PATTERSON'S 25% LINDANE WETTABLE POWDER

00114 PATTERSON'S ROSE DUST

00127 PATTERSON'S 5% LINDANE SPRAY

00158 PATTERSON'S TOXAPHENE-LINDANE

00200 PATTERSON'S 12% B H C WETTABLE POWDER

00226 PATTERSON'S BORER KILLER

00239 PATTERSON S BORER KILLER BARK PENETRATING TYPE AEROSOL SPRAY

****

(02217) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 53

****

REGISTRANT *NAME AND ADDRESS*

* 002217 PBI-GORDON CORPORATION
300 SO 3RD ST
KANSAS CITY KS 66118

********** PRODUCT NAME **********

00179 1% LINDANE DUST

00180 10% LINDANE EMULSIFIABLE CONCENTRATE

00242 STOCK-TOX PLUS LIVESTOCK SPRAY CONC.)

00324 GORDON'S SUPERKILL SOD WEBWORM SPRAY

00562 DUAL-PURPOSE RES-Q

****

REGISTRANT *NAME AND ADDRESS*

* 002342 KERR-MCGEE CHEMICAL CORP
MGR PKG & LABELING
KERR-MCGEE CENTER
OKLAHOMA CITY OK 73102

********** PRODUCT NAME **********

00244 FASCO LINDANE 20

00252 FASCO LINDANE 25-WP

00374 FASCO BBC LIQ-1 PROD NO 879

00771 GRO-TONE BORER SPRAY

00839 20% LINDANE SPRAY

****

(02382) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 54

****

REGISTRANT *NAME AND ADDRESS*

* 002382 CARSON CHEMICALS INC
PO BOX 466
NEW CASTLE IN 47362

********** PRODUCT NAME **********

00004 GAMMA R-X DIP OR SPRAY FOR DOGS

00007 F-T-SEVIN* DIP FOR DOGS

00011 HEX DIP OR SPRAY FOR SWINE, SHEEP AND BEEF CATTLE

00057 EQUI-DUST

00062 LIN-RO

00080 SCREW WORM BOMB "FORMULA CHANGE"

****

REGISTRANT *NAME AND ADDRESS*

* 002393 HOPKINS AGRIC CHEM COMPANY
BOX 584
MADISON WI 53701

********** PRODUCT NAME **********

00171 HOPKINS 1% LINDANE DUST

00305 25% LINDANE WETTABLE POWDER

****

(02459) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 55

****

REGISTRANT *NAME AND ADDRESS*

* 002459 STEVENS IND INC
N MAIN ST PO BOX 272
DAWSON GA 31742

********** PRODUCT NAME **********

00202 MASTER BRAND BHC - 9 DUST CONCENTRATE

****

REGISTRANT *NAME AND ADDRESS*

* 002596 HARTZ MOUNTIAN CORP
700 SO 4TH ST
HARRISON NJ 07029

********** PRODUCT NAME **********

00016 HARTZ DOG FLEA KILLER COLLAR

00017 HARTZ MOUNTAIN CAT FLEA KILLER COLLAR

****

(02666)

**** PRODUCT SEARCH LISTING ****

11/29/76

FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE

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****

REGISTRANT *NAME AND ADDRESS*

* 002666 CORNELL CHEMICAL & EQUIPMENT CO. INC.
3500 WASHINGTON BLVD.
BALTIMCRE MD. 21227

********** PRODUCT NAME **********

00030 CORNELL ECTOPARASITE POWDER

****

REGISTRANT *NAME AND ADDRESS*

* 002749 ACETO CHEMICAL COMPANY INC
126-02 NORTHERN BLVD
FLUSHING NY 11368

********** PRODUCT NAME **********

00014 LINDANE 100

00265 DUO M-L INSECTICIDE & FUNGICIDE SEED TREATMENT

****

(02781) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 57

****

REGISTRANT *NAME AND ADDRESS*

* 002781 HAPPY JACK INC
BOX 475
SNOW HILL NC 28580

********** PRODUCT NAME **********

00003 HAPPY JACK KENNEL DIP

****

REGISTRANT *NAME AND ADDRESS*

* 002800 HUMCO LABORATORY INC
PO BOX 2550 1008 WHITAKER ST
TEXARKANA TX 75501

********** PRODUCT NAME **********

00022 HUMCO EQ 335 SCREW WORM REMEDY

****

REGISTRANT *NAME AND ADDRESS*

* 002917 CARTER INSEC & CHEMICAL COMPANY INC
PO BOX 127
TEACHEY, NC 28464

********** PRODUCT NAME **********

00047 CARTER CAROLINA BRAND 1% LINDANE DUST

00054 CARTER CAROLINA BRAND CUKE DUST

****

(02935) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 58

****

REGISTRANT *NAME AND ADDRESS*

* 002935 WILBUR ELLIS CO.
P. O. BOX 1286
FRESNO, CA 93715

********** PRODUCT NAME **********

00235 RED-TOP LINDANE 20 SPRAY

00243 RED-TOP METHO-LIN RESIDUAL

00377 RED-TOP LINDANE 1.7 SPRAY

****

REGISTRANT *NAME AND ADDRESS*

* 002993 BRAYTON CHEMICALS INC
P.O. BOX 238
WEST BURLINGTON IA 52655

********** PRODUCT NAME **********

00013 BRAYTON RESIDUAL INSECTICIDE FOR FOOD PLANTS

****

(03050) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 59

****

REGISTRANT *NAME AND ADDRESS*

* 003050 COYNE CHEMICAL COMPANY
2428 EAST 56TH STREET
LOS ANGELES CA 90058

********** PRODUCT NAME **********

00013 SPRAY-TROL BRAND INSECTICIDES TOXI-TROL

****

REGISTRANT *NAME AND ADDRESS*

* 003134 EVSCO PHARMACEUTICAL COMPANY
3345 ROYAL AVE
OCEANSIDE NY 11572

********** PRODUCT NAME **********

00004 BENZYL HEX (IMPROVED)

00033 THERADEX WITH LINDANE

****

(03213) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 60

****

REGISTRANT *NAME AND ADDRESS*

* 003213 VITA PLUS CORP
P. O. BOX 9126
MADISON, WI 53715

********** PRODUCT NAME **********

00008 V MANGE DRY TREATMENT

00027 VITA PLUS MANGE WET TREATMENT FOR HOGS, CATTLE SHEEP.

****

REGISTRANT *NAME AND ADDRESS*

* 003468 SCHALL CHEMICAL INC
BOX 862
MONTEVISTA CO 81144

********** PRODUCT NAME **********

00005 SCHALL LIVESTOCK SPRAY, DIP & OILER CONC.

00039 BHC I E

****

(03487) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 61

****

REGISTRANT *NAME AND ADDRESS*

* 003487 BACON PRODUCTS COMPANY INC
BOX 8127
CHATTANOOGA TN 37421

********** PRODUCT NAME **********

00018 FLIPO MANGE CURE

****

REGISTRANT *NAME AND ADDRESS*

* 003509 SAFE WAY FARM PRODUCTS COMPANY
2519 E FIFTH ST
AUSTIN TX 78702

********** PRODUCT NAME **********

00050 SILVERTOX BEEF ANIMAL - SHEEP AND GOAT LIVESTOCK SPRAY

00082 EAR TICK REMEDY

00105 SAFE-WAY SCARLET RED EAR TICK BOMB

00109 EAR TICK REMEDY

****

**** PRODUCT SEARCH LISTING ****

(03618) PAGE 62

FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE

11/29/76

****

REGISTRANT *NAME AND ADDRESS*

* 003618 INDUSTRIAL COLLOIDS & CHEMICALS INC
PO BOX 1946
KNOXVILLE, TN 37901

********** PRODUCT NAME **********

00029 INDUSTRIAL FORMULA 20% LINDANE

****

REGISTRANT *NAME AND ADDRESS*

* 003624 NOVA PRODUCTS INC
PO BOX 5086
KANSAS CITY KS 66119

********** PRODUCT NAME **********

00003 NOPROKILL-30 WITH METHOXYCHLOR

00124 RESIDUAL SPRAY NO. 1

****

(03635) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 63

****

REGISTRANT *NAME AND ADDRESS*

* 003635 OXFORD CHEMICALS
PO BOX 80202
ATLANTA GA 30341

********** PRODUCT NAME **********

00150 MALINEX RESIDUAL FLY SPRAY

****

REGISTRANT *NAME AND ADDRESS*

* 003696 TEXIZE CHEMICALS, CO.
BOX 368
GREENVILLE, SC 29602

********** PRODUCT NAME **********

00032 NEW-CLEAR FREEWAX

****

REGISTRANT *NAME AND ADDRESS*

* 003735 ARLENGE LABORITORIES
175 PEARL ST
BROOKLYN NY 11201

********** PRODUCT NAME **********

00012 ARLENGE ROSE DUST

00013 ARLENGE ROSE COMBINATION SPRAY

(03735) **** PRODUCT SEARCH LISTING ****

11/29/76 PAGE 64

**CONTINUE REGISTRANT 003735

00021 ARLENGE ROSE COMBINATION SPRAY

****

REGISTRANT *NAME AND ADDRESS*

* 003743 SOUTHERN AGRICULTURAL CHEMICALS INC
PO BOX 527
KINGSTREE SC 29556

********** PRODUCT NAME **********

00109 ROYAL BRAND BHC 1-E

00287 MANEB NO. 6 DUST

00302 20% LINDANE E.C.

00324 ROYAL BRAND LINDANE 25-W

00339 CUKE SPECIAL

****

REGISTRANT *NAME AND ADDRESS*

* 003770 ECONOMY PROD COMPANY
BOX 427
SHENANDOAH IA 51601

********** PRODUCT NAME **********

00038 ECONOMY CATTLE & STOCK INSECTICIDE

00070 ECONOMY RANGE CATTLE SPRAY

00090 ECONOMY PRODUCT'S LINDANE

(03770) **** PRODUCT SEARCH LISTING ****

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**CONTINUE REGISTRANT 003770

00119 ECONOMY STOCK-TOX PLUS

00209 DIAZINON-LINDANE SEED CORN PROTECTANT

00317 SEED/QUIK SEED PROTECTANT AND LUBRICANT

****

REGISTRANT *NAME AND ADDRESS*

* 003890 RICHMOND VET SPLY COMPANY
ATTN-W BUDOWITZ BOX 8826
RICHMOND VA 23226

********** PRODUCT NAME **********

00002 HEXRIN

00006 GAMMENE

00008 MALDANE

00012 PEST OFF SHAMPOO

****

REGISTRANT *NAME AND ADDRESS*

* 003912 PAPER PRODUCTS INC
BOX 5158
LONG BEACH CA 90805

********** PRODUCT NAME **********

00001 NO BUGS M'LADY ODORLESS SHELF & DRAWER PAPER

****

(03941) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 66

****

REGISTRANT *NAME AND ADDRESS*

* 003941 ATHENA CORPORATION
4838 WOODALL
DALLAS TX 75247

********** PRODUCT NAME **********

00028 PEST-GUARD PRETTY PLEASE BUG PROOF SHELF PAPER

****

REGISTRANT *NAME AND ADDRESS*

* 003997 ARNOLD LABS DIV OF WESTERFIELD LABS INC
3941 BROTHERTON RD
CINCINNATI OH 45209

********** PRODUCT NAME **********

00001 ARNOLD SARCOPTIC MANGE TREATMENT

****

REGISTRANT *NAME AND ADDRESS*

* 004030 OLD SCRATCH INC OF AMARILLO
PO BOX 5068
AMARILLO TX 79107

********** PRODUCT NAME **********

00002 OLD SCRATCH CONCENTRATED LINDANE - TOXAPHENE

****

(04077) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 67

****

REGISTRANT *NAME AND ADDRESS*

* 004077 ORB INDUSTRIES INC
#2 RACE ST (BOX 1067)
UPLAND PA 19015

********** PRODUCT NAME **********

00020 ORB ROACH AND ANT BOMB

00021 MOTH CONTROL

00055 LINSPRAY EXTRA #128 ROACH AND ANT BOMB WITH LINDANE AND DDVP

****

REGISTRANT *NAME AND ADDRESS*

* 004127 ACELINE PRODUCTS CORPORATION
PO BOX 236 27 GORHAM ST
ROCHESTER NY 14605

********** PRODUCT NAME **********

00001 THE ORIGINAL FLEA COLLAR FOR DOGS WITH LINDANE

00002 ACE FLEACOLLAR FOR CATS

00010 FLEABAND FLEA KILLER FITS ALL DOGS

00011 FLEABAND FLEA KILLER FITS ALL CATS

****

****

REGISTRANT *NAME AND ADDRESS*

* 004185 SMITH-DOUGLASS DIV.
BORDEN CHEMICAL, BORDEN INC.
5100 VIRGINIA BEACH BLVD.
NORFOLK, VA 23501

********** PRODUCT NAME **********

00121 SMITH-DOUGLASS 20% LINDANE EMULSIFIABLE

00168 NUTRO ROSE AND FLORAL DUST

00277 NUTRO ROSE AND FLORAL SPRAY

00323 NUTRO AZALEA EVERGREEN SPRAY (AEROSOL)

00435 BORDEN NUTRO LIQUID ROSE SPRAY

****

REGISTRANT *NAME AND ADDRESS*

* 004418 PENNSYLVANIA CONSUMERS OIL COMPANY
COUNCIL BLUFFS IA 51501

********** PRODUCT NAME **********

00006 T V B HOG OIL WITH LINDANE

****

(04581)

**** PRODUCT SEARCH LISTING ****

11/29/76

FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE

PAGE 69

****

REGISTRANT *NAME AND ADDRESS*

* 004581 PENNWALT CORP AGCHEM DIV.
PENNWALT TECHNOLOGICAL CENTER
P.O. BOX C
KING OF PRUSSIA, PA 19406

********** PRODUCT NAME **********

00027 PENCO BHC W-12

****

REGISTRANT *NAME AND ADDRESS*

* 004636 MELVIN E WYANT
ROSE SPECIALIST INC
JOHNNY CAKE RIDGE
MENTOR, OH 44060

********** PRODUCT NAME **********

00003 WYANT ROSE AND FLORAL SPRAY POWDER

****

REGISTRANT *NAME AND ADDRESS*

* 004691 PHILLIPS ROXANE INC
2621 N BELT HIGHWAY
ST JOSEPH MO 64502

********** PRODUCT NAME **********

00003 PET'S BEST MANGE LOTION

00006 INSECTICIDAL SHAMPOO WITH LANOLIN FOR DOGS

(04691)

**** PRODUCT SEARCH LISTING ****

11/29/76

PAGE 70

**CONTINUE REGISTRANT 004691

00014 PET'S BEST SHAMPOO

00069 SCREW WORM SPRAY INSECTICIDE

00070 WOUND GUARD SMEAR ANTISEPTIC, FLY REPELLANT, PROTECTANT DRESSING

00092 SCREW WORM AND EAR TICK SPRAY

00098 LINDANE MANGE & LOUSE SPRAY

00105 ANCHOR DERMA-SECT

****

REGISTRANT *NAME AND ADDRESS*

* 004715 COLORADO INTERNATIONAL CORP
5321 DAHLIA ST
COMMERCE CITY CO 80022

********** PRODUCT NAME **********

00145 BEST 4 SERVIS BRAND TOXADANE READY MIXED OILER COMPOUND

00149 BEST 4 SERVIS BRAND HIGH STRENGTH PROTEX TOXADANE

00176 BEST 4 SERVIS BRAND PROTEX TOXAPHENE

00251 BEST 4 SERVIS BRAND LINDANE 20% EMUL CONC

00252 BEST 4 SERVIS BRAND 25% LINDANE WETTABLE

00287 BEST 4 SERVIS BRAND DIAZINON-LINDANE SEED PROTECTION

00302 BEST 4 SERVIS BRAND 25% LINDANE SEED TREATER

****

(C4812) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 71

****

REGISTRANT *NAME AND ADDRESS*

* 004812 EASTERN LABS INC
1483 WASHINGTON AVE
VINELAND NJ 08360

********** PRODUCT NAME **********

00021 CHLORMADANE

****

REGISTRANT *NAME AND ADDRESS*

* 004828 ABCO INC
230 INDUSTRY BLVD
NORTH HUNTINGTON, PA 15642

********** PRODUCT NAME **********

00009 LINDEX, STAND OUT

****

REGISTRANT *NAME AND ADDRESS*

* 004876 AG SUPPLY INC
INDUSTRIAL DRIVE
HOPKINSVILLE KY 42240

********** PRODUCT NAME **********

00021 CABLE-OIL OR LIVESTOCK SPRAY

00024 LINDANE SPRAY CONCENTRATE

(04876)

**** PRODUCT SEARCH LISTING ****

11/29/76

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**CONTINUE REGISTRANT 004876

00049 TOBACCO TRANSPLANTER SOLUTION

****

REGISTRANT *NAME AND ADDRESS*

* 004887 STEPHENSON CHEM COMPANY INC
BOX 87188
COLLEGE PARK GA 30337

********** PRODUCT NAME **********

00018 PINE BEETLE SPRAY

00136 STEPHENSON CHEMICALS LINDANE TECH

00155 STEPHENSON CHEMICALS 20% LINDANE EMULSIFIABLE CONCENTRATE

****

REGISTRANT *NAME AND ADDRESS*

* 004931 GOOD-LIFE CHEMICALS INC
BOX 687
EFFINGHAM IL 62401

********** PRODUCT NAME **********

00048 LINDANE-12W 12% WETTABLE POWER INSECTICIDE

00054 NEW: GOOD-LIFE ROSE DUST OR SPRAY

00127 GOOD LIFE LINDANE 25-W

****

(04981)

**** PRODUCT SEARCH LISTING ****

11/29/76

FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE

PAGE 73

****

REGISTRANT *NAME AND ADDRESS*

* 004981 REDWOOD CHEMICAL INC
12245 ROBIN BLVD
HOUSTON, TX 77045

********** PRODUCT NAME **********

00033 REDWOOD'S BHC EMULSIFIABLE

****

REGISTRANT *NAME AND ADDRESS*

* 005011 CARMEL CHEMICAL CORPORATION
BOX 406
WESTFIELD IN 46074

********** PRODUCT NAME **********

00013 CARMEL -ESIDUAL SPRAY CONCENTRATE NO. 2 FORMULA F-22

00051 FORMULA GH-16

00090 BAKER'S RESIDUAL INSECTICIDE CARMEL FOOD PROTECTANT FORMULA F-21

****

**** PRODUCT SEARCH LISTING ****

(05185) PAGE 74

FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE

11/29/76

****

REGISTRANT *NAME AND ADDRESS*

* 005185 BIO-LABS INC
627 E COLLEGE AVE PO BOX 1489
DECATUR GA 30031

********** PRODUCT NAME **********

00196 BIO-SEC ANT & ROACH KILLER

****

REGISTRANT *NAME AND ADDRESS*

* 005340 US XXX PROD COMPANY
3018 COMMERCE ST
DALLAS TX 75226

********** PRODUCT NAME **********

00006 U.S. XXX ROACH AND ANT SPRAY

****

REGISTRANT *NAME AND ADDRESS*

* 005440 CARDINAL CHEMICAL COMPANY
GREEN & SANSOME STS
SAN FRANCISCO CA 94111

********** PRODUCT NAME **********

00005 CARDINAL METHOXANE CONCENTRATE

00009 CARDINAL 20% LINDANE

(05440)

**** PRODUCT SEARCH LISTING ****

11/29/76

**CONTINUE REGISTRANT 005440

PAGE 75

00014 CARDINAL RESIDUAL INSECTICIDE

****

REGISTRANT *NAME AND ADDRESS*

* 005481 AMVAC CHEMICAL CORP
4100 EAST WASHINGTON BLVD
LOS ANGELES, CA 90023

********** PRODUCT NAME **********

00071 ALCO L-T STOCK SPRAY

****

REGISTRANT *NAME AND ADDRESS*

* 005490 JAMIESON CHEM COMPANY
4011 FLORIDA AVE
TAMPA FL 33603

********** PRODUCT NAME **********

00001 TERMIT-I-CIDE C-98 SPRAY

00007 F-T-C-SPRAY

****

(05533) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 76

****

REGISTRANT *NAME AND ADDRESS*

* 005533 PAINS WESSEX LTD FUMITE DIV
HIGH POST SALISBURY
WILTSHIRE ENGLAND 00000

********** PRODUCT NAME **********

00001 FUMITE LINDANE GENERATOR

==========

REGISTRANT *NAME AND ADDRESS*

* 005535 ADIKES INC J & L
182-12 93RD AVE
JAMAICA NY 11423

********** PRODUCT NAME **********

00092 GRO-WELL BORER KILLER

****

REGISTRANT *NAME AND ADDRESS*

* C05602 HUB STATES CORPORATION
2002 NORTH ILLINOIS STREET
INDIANAPOLIS IN 46202

********** PRODUCT NAME **********

00023 LINDANE 20% SOLUTION

00070 HUB STATES FORMULA 32

(05602) **** PRODUCT SEARCH LISTING ****

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**CONTINUE REGISTRANT 005602

00096 HUB STATES LINDANE FOR MANUFACTURING PURPOSES ONLY

00120 HUB STATES B-20 LINDANE INSECTICIDE SPRAY CONCENTRATE

****

REGISTRANT *NAME AND ADDRESS*

* 005605 FARMINGDALE GARDEN LABS
136 VERDI ST
FARMINGDALE NY 11735

********** PRODUCT NAME **********

00035 FARMINGDALE RESISTANT CHINCH BUG SPRAY

00055 FARMINGDALE 20% LINDANE INSECTICIDE BORER SPRAY

****

REGISTRANT *NAME AND ADDRESS*

* 005620 BOATMAN BILL & COMPANY
308 SOUTH MAPLE STREET
BAINBRIDGE, OH 45612

********** PRODUCT NAME **********

00003 B & B FLEA KONTROLLER FOR DOGS ONLY

00005 B & B K-9 DIP CONCENTRATE FOR DOGS

****

(05645) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 78

****

REGISTRANT *NAME AND ADDRESS*

* 005645 VET LABS INC
12340 SANTA FE DR
LENEXA KS 66215

********** PRODUCT NAME **********

00003 BENZENE HEXACHLORIDE SOLUTION

00004 FARMINGDALE BENDANE

00005 FLEA SHAMPOO

****

REGISTRANT *NAME AND ADDRESS*

* 005778 GRO CHEMICAL COMPANY
3530 NW 31ST ST
MIAMI FL 33142

********** PRODUCT NAME **********

00007 ROSE SPRAY

00025 GRO SUPER GO-CHINCH WITH DIAZINON LIQUID SPRAY CONCENTRATE

00032 SUPER CHINCH LAWN SPRAY WITH BHC-TOXAHENE-DIAZINON

00034 SUPER CHINCH LAWN SPRAY WITH BHC TOXAPHENE-ETHION

00035 SUPER CHINCH LAWN SPRAY WITH BHC-TOXAPHENE-TRITHION

****

(05887) **** PRODUCT SEARCH LISTING **** PAGE 79

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE

****

REGISTRANT *NAME AND ADDRESS*

* 005887 BLACK LEAF PROD COMPANY
667 N STATE ST
ELGIN IL 60120

********** PRODUCT NAME **********

00054 BLACK LEAF BORER AND LEAF MINER SPRAY

****

REGISTRANT *NAME AND ADDRESS*

* 005967 MOYER CHEMICAL COMPANY
BOX 945
SAN JOSE CA 95108

********** PRODUCT NAME **********

00121 BHC 12-W

****

REGISTRANT *NAME AND ADDRESS*

* 005988 CENTREX PRODUCTS INC
TOPSFIELD, MA 01983

********** PRODUCT NAME **********

00003 FLEA KILLING COLLAR

00004 NIFTY FLEA KILLING COLLAR

****

(06152) **** PRODUCT SEARCH LISTING **** PAGE 80

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE

****

REGISTRANT *NAME AND ADDRESS*

* 006152 ATOMIC CHEMICAL CO
BOX 1111
SPOKANE WA 99210

********** PRODUCT NAME **********

00004 M T BIN SPRAY

****

REGISTRANT *NAME AND ADDRESS*

* 006175 HART-DELTA INC
5055 CHOCTAW DR
BATON ROUGE LA 70805

********** PRODUCT NAME **********

00014 DEMOLENE

00015 PARA-MITE

****

(06218) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 81

****

REGISTRANT *NAME AND ADDRESS*

* 006218 SUMMIT CHEMICAL COMPANY
117 W 24TH ST
BALTIMCRE MD 21218

********** PRODUCT NAME **********

00015 FLORA-FOG MALATHION-LINDANE GREENHOUSE FOGGING INSECTICIDE

****

REGISTRANT *NAME AND ADDRESS*

* 006305 ROBECO CHEM COMPANY
51 MADISON AVE
NEW YORK NY 10010

********** PRODUCT NAME **********

00001 LINDANE TECHNICAL

****

REGISTRANT *NAME AND ADDRESS*

* 006392 BURN=BIOTEC LABORATORIES DIV
CHROMALLOY PHARMACEIUTICAL INC
7711 OAKPORT STREET
OAKLAND, CA 94621

********** PRODUCT NAME **********

00002 DEMSARDEX IMPROVED

****

(06552) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 82

****

REGISTRANT *NAME AND ADDRESS*

* 006552 KAY DEE FEED COMPANY
1919 GRAND AVENUE
SIOUX CITY IA 51107

********** PRODUCT NAME **********

00005 KAY DEE TOX II (LIVESTOCK SPRAY CONCENTRATE)

****

REGISTRANT *NAME AND ADDRESS*

* 006566 JOHNSON JR
RT 3 BOX 47
SUMMIT MS 39666

********** PRODUCT NAME **********

00002 JOHNSON'S FOOT LOTION FOR DOGS

****

REGISTRANT *NAME AND ADDRESS*

* 006651 SONFORD PRODUCTS CORPORATION
PO BOX 5570
JACKSON MS 39208

********** PRODUCT NAME **********

00011 SONFORD BHC ONE

****

(06662) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 03

****

REGISTRANT *NAME AND ADDRESS*

* 006662 DALCO CHEMICAL COMPANY
200 LEE ROAD
CLEVELAND OH 44118

********** PRODUCT NAME **********

00013 DALCO LINREZ

****

REGISTRANT *NAME AND ADDRESS*

* 006720 SOUTHERN MILL CREEK PRODUCTS COMPANY INC
BOX 1096
TAMPA FL 33601

********** PRODUCT NAME **********

00161 SMCP BHC E-11

****

REGISTRANT *NAME ANC ADDRESS*

* 006754 DETTEL BACH PESTICIDE CORP.
P.O. BOX9986
ATLANTA GA 30319

********** PRODUCT NAME **********

00004 PROFESSIONAL NO. 20 LINDANE EMULSION CONCENTRATE

****

(06830) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 84

****

REGISTRANT *NAME AND ADDRESS*

* 006830 OCTAGON PROCESS INC
596 RIVER RD
EDGEWATER NJ 07020

********** PRODUCT NAME **********

00002 INSECTICIDE, LINDANE

00018 INSECTICIDE, LINDANE, POWDER, DUSTING OCTAGON L11490

00022 LINDANE INSECTICIDE 25% EMULSIFIABLE CONCENTRATE

00037 INSECT LINDANE POWDER DUSTING OCTAGON L11490 MIL SPEC MIL-I-11490B

****

REGISTRANT *NAME AND ADDRESS*

* 006900 DILL J J COMPANY
BOX 788
KALAMAZOO MI 49005

********** PRODUCT NAME **********

00044 DILL LINDANE 10% DS

00131 LINDANE 20 EMS

****

(07001) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 85

****

REGISTRANT *NAME AND ADDRESS*

* 007001 OCCIDENTAL CHEMICAL CC
P O BOX 198
LATHROP, CA 95330

********** PRODUCT NAME **********

00070 BEST LIVESTOCK SPRAY CONTAINS TOXAPHENE AND LINDANE

00211 BEST LINDANE BORER SPRAY

****

REGISTRANT *NAME AND ADDRESS*

* 007122 AR CHEMICAL CORP
1514 ELEVENTH ST
PORTSMOUTH OH 45662

********** PRODUCT NAME **********

00038 LINDANE - OS 20%

00041 GUARDIAN LINDANE WE 20% (PRODUCT NO. 6102)

****

(07150) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 86

****

REGISTRANT *NAME AND ADDRESS*

* 007150 AMCO DRUG PRODUCT COMPANY INC
ATTN MATTSON D A BOX 207
NORTH OLMSTED OH 44070

********** PRODUCT NAME **********

00005 DI-BEX FOR VETERINARY USE ONLY

****

REGISTRANT *NAME AND ADDRESS*

* 007234 FORSHAW CHEMICALS INC
650 STATE STREET PO BOX 6055
CHARLOTTE NC 28208

********** PRODUCT NAME **********

00002 BEETLECIDE

00013 BEETLE DED

00052 FORLIN 20% LINDANE EMULSIFIABLE CONCENTRATE

****

(07273) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 87

****

REGISTRANT *NAME AND ADDRESS*

* 007273 CROWN CHEMICAL INCORPORATED
4995 NORTH MAIN STREET
ROCKFORD IL 61101

********** PRODUCT NAME **********

00027 CROWN LINDANE EMULSIFIABLE CONCENTRATE

00C96 CHECK-PEST B-20 LINDANE EMULSIFIABLE SPRAY CONC.

****

REGISTRANT *NAME AND ADDRESS*

* C074C1 VOLUNTARY PURCHASING GROUP INC
PO BOX 460
BONHAM TX 75418

********** PRODUCT NAME **********

00032 FERTI-LOME WASP AND HORNET JET SPRAY

00035 FERTI-LOME ROSE AND FLOWER SPRAY

00272 HI-YIELD LIVESTOCK SPRAY NO 1

****

(07455) **** PRODUCT SEARCH LISTING **** PAGE 88

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE

****

REGISTRANT *NAME AND ADDRESS*

* 007455 AGRICULTURAL PROD DIV.
INTERNATIONAL MULTIFOODS CORP.
1200 MULTIFOODS BLDG.
MINNEAPOLIS MN 55402

********** PRODUCT NAME **********

00006 SUPERSWEET DRY INSECTICIDE

00013 SUPERSWEET MANGE & LICE CONTROL

00026 OSBORN SW-T BOMB

****

REGISTRANT *NAME AND ADDRESS*

* 007620 MILLEN INDUSTRIES INC
440 PARK AVE S
NEW YORK NY 10016

********** PRODUCT NAME **********

00001 CLOBBERBUG

****

(07738) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 89

****

REGISTRANT *NAME AND ADDRESS*

* C07738 WINTHROP LABORATORIES-VETERINARY DEPARTMENT
DIV STERLING DRUG INC 90 PARK AVE
NEW YORK NY 10016

********** PRODUCT NAME **********

00001 LOTHIOL MEDICATED SHAMPOO FOR DOGS

****

REGISTRANT *NAME AND ADDRESS*

* 008203 ICI UNITED STATES INC.
REGULATORY LAW DEPT.
P.O. BOX 751
WILMINGTON, DE 19899

********** PRODUCT NAME **********

00001 GAMMASAN

00002 CHIPMAN 3-WAY TRIPLE PURPOSE INSECTICIDE - FUNGICIDE SEED TREATMENT

00007 CHIPMAN D-L INSECTICIDE SEED TREATMENT

00008 GRANOL N-M

00012 GRANOL(R) P-C PEANUT SEED FUNGICIDE AND INSECTICIDE

00014 SOYBEAN 3-WAY (MOLY) TRIPLE PUR PLANTER BOX INSECT FUNG SEED PROT

****

(08Z04) **** PRODUCT SEARCH LISTING **** PAGE 90

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE

****

REGISTRANT *NAME AND ADDRESS*

* C08204 AMERICAN BAKERS COOPERATIVE INC
725 TEANECK ROAD
TEANECK NJ 07666

********** PRODUCT NAME **********

00002 ABCO INSECTICIDE NO. 1

****

REGISTRANT *NAME AND ADDRESS*

* 008222 LING FUANG INDUSTRIES, INC.
LING FUANG, IND.
1235 48TH AVENUE
OAKLAND, CA 94601

********** PRODUCT NAME **********

00023 TOWN & COUNTRY MULTI-PURPOSE SOIL & BULB DUST

****

REGISTRANT *NAME AND ADDRESS*

* 008343 GABRIEL CHEMICALS LTD
204 21ST AVE
PATERSON, NJ 07509

********** PRODUCT NAME **********

00020 LINDANE

00021 LINDANE 95% DUST CONCENTRATE

(C8343) **** PRODUCT SEARCH LISTING ****

PAGE 91

11/29/76

**CONTINUE REGISTRANT 008343

00034 1% LINDANE POWDER

00049 AGRISECT BHC 12% WETTABLE PCWDER

00063 AGRISECT LINDANE 20% EMULSIFIABLE CONCENTRATE

00109 AGRISECT BRAND LINDANE 25% W. P.

****

REGISTRANT *NAME AND ADDRESS*

* 008521 GABRIEL CHEMICAL LTD
BOX B
ROBBINSVILLE NJ 08691

********** PRODUCT NAME **********

00047 LINDANE

00048 LINDANE 25% WETTABLE POWDER

00049 LINDANE 20% EMULSIFIABLE CONCENTRATE

00071 LINDANE 10% OIL SOLUBLE CONCENTRATE

00094 LINDANE 95% DUST

00115 GABRIEL BHC 1# EMULSIFIABLE CONCENTRATE

****

(08590) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 92

****

REGISTRANT *NAME AND ADDRESS*

* 008590 AGWAY INC
CHEMICAL DIV BOX 1333
SYRACUSE NY 13201

********** PRODUCT NAME **********

00087 AGWAY LINDANE 1D

00213 CAPTAN-LINDANE 7.5-.5D

00239 AGWAY TREE AND SHRUB SPRAY

00384 LINDANE 20 EC

****

REGISTRANT *NAME AND ADDRESS*

* 008759 OGLE RAY J & COMPANY
1326 FLAMINGTO DR
LANTANA FL 33462

********** PRODUCT NAME **********

00001 GUARD INSECTICIDAL PAINT WALL FINISH

****

(C8881) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 93

****

REGISTRANT *NAME AND ADDRESS*

* C08881 SPENCER VETERINARY SUPPLY COMPANY
223 W 7TH ST BOX 214
SPENCER IA 51301

********** PRODUCT NAME **********

00004 LIVESTOCK MANGE & LICE CONTROL

****

REGISTRANT *NAME AND ADDRESS*

* 008934 RING AROUND PRODUCTS INC
PO BOX 589
MONTGOMERY AL 36101

********** PRODUCT NAME **********

00063 RING AROUND BRAND GAMMA KIL-BENZENE HEXACHLORIDE (WETTABLE)

****

REGISTRANT *NAME AND ADDRESS*

* 009114 ALLIED MILLS
110 NORTH WACKER DRIVE
CHICAGO, IL 60606

********** PRODUCT NAME **********

00012 WAYNE HOG MANGE CURE

00014 WAYNE SUPER T & L LIVESTOCK SPRAY

****

(09160) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 94

****

REGISTRANT *NAME AND ADDRESS*

* 009160 REED & CARNRICK PHARMACEUTICALS
30 BORIGHT AVE
KENILWORTH, NJ 07033

********** PRODUCT NAME **********

00001 KWELL SHAMPOO GAMMA BENZENE HEXACHLORIDE

00002 KWELL LOTION

00003 KWELL CREAM

****

REGISTRANT *NAME AND ADDRESS*

* 009445 INTER-STATE NURSERIES
HAMBURG, IA 51640

********** PRODUCT NAME **********

00003 INTER-STATE ROSE SPRAY

00005 INTER-STATE ROSE DUST

****

(09591) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 95

****

REGISTRANT *NAME AND ADDRESS*

* 009591 NATIONWIDE CHEMICAL PRODUCTS INC
CHEM. FORMULATOR/CUSTOMS PKG.
P. O. BOX 3027
HAMILTON OH 45013

********** PRODUCT NAME **********

00011 20% LINDANE OIL SOLUBLE CONCENTRATE

00018 20% LINDANE EMULSIFIABLE CONCENTRATE

****

REGISTRANT *NAME AND ADDRESS*

* 009763 BOND SALES COMPANY
70 FREIGHT ST
PAWTUCKET RI 02862

********** PRODUCT NAME **********

00001 PEDIGREE FLEA COLLAR FOR CATS

00002 PEDIGREE FLEA COLLAR FOR DOGS

****

(C9779) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 96

****

REGISTRANT *NAME AND ADDRESS*

* 005779 RIVERSIDE CHEM COMPANY
P.O. BOX 171199 855 RIDGE LAKE BLVD
MEMPHIS TN 38117

********** PRODUCT NAME **********

00214 RIVERSIDE BHC 1

****

REGISTRANT *NAME AND ADDRESS*

* C09780 E & E ENTERPRISES INC
541 BUFORD DRIVE
LAWRENCEVILLE GA 30245

********** PRODUCT NAME **********

00001 RANGE MAGIC

****

REGISTRANT *NAME AND ADDRESS*

* 005782 WOODBURY CHEMICAL COMPANY
PO BOX 4319
PRINCETON FL 33030

********** PRODUCT NAME **********

00046 LINDANE 1.7-E

****

(09840) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 97

****

REGISTRANT *NAME AND ADDRESS*

* 009840 G & W PRODUCTS
ANIMAL RESEARCH CO DIV
9907 SE 82ND AVE
PORTLAND, OR 97266

********** PRODUCT NAME **********

00001 EAP CARE

****

REGISTRANT *NAME AND ADDRESS*

* 009859 LANDIA CHEMICAL COMPANY
1801 W. OLIVE ST
LAKELAND FL 33801

********** PRODUCT NAME **********

00017 B & G LINDANE S-20

00062 BHD E-11

****

(10024) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 98

****

REGISTRANT *NAME AND ADDRESS*

* 010024 CADIE PRODUCTS CORPORATION
100 SIXTH AVE
PATERSON NJ 07524

********** PRODUCT NAME **********

00001 CADIE DOG FLEA-KILL COLLAR WITH LINDANE

00002 CADIE CAT FLEA-KILL COLLAR LINDANE

****

REGISTRANT *NAME AND ADDRESS*

* 010290 PROFESSIONAL CHEMICAL COMPANY INC
P.O. BOX 94071 4517 YALE ST
HOUSTON TX 77018

********** PRODUCT NAME **********

00018 PROFESSIONAL BHC E-1

****

(10455) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 99

****

REGISTRANT *NAME AND ADDRESS*

* 010455 PUPPY PALACE ENTERPRISES INC
1000 LAKE ST. LOUIS BLVD.
LAKE ST. LOUIS, MO 63367

********** PRODUCT NAME **********

00004 PUPPY PALACE FLEA, TICK & LICE DIP

****

REGISTRANT *NAME AND ADDRESS*

* 010531 PETLAND PRODUCTS INC
3906 WEST NORTH AVENUE
CHICAGO IL 60647

********** PRODUCT NAME **********

00001 PETLAND FLEA-BANN DOG COLLAR

****

REGISTRANT *NAME AND ADDRESS*

* 010912 HAYNES CHEMICAL COMPANY
P.O. BOX 30
EAST GRAND FORKS, MN 56721

********** PRODUCT NAME **********

00002 TRINOX

****

(11357) **** PRODUCT SEARCH LISTING **** PAGE 100

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE

****

REGISTRANT *NAME AND ADDRESS*

* 011357 SENTINEL INSECT CONTROL LABORATORY
211 N KLEIN ST
SPRINGFIELD IL 62702

********** PRODUCT NAME **********

00003 SENTINEL 20% LINDANE

****

REGISTRANT *NAME AND ADDRESS*

* 011544 MORGAN CHEMICALS INC
PO BOX 3002
GREAT FALLS MT 59401

********** PRODUCT NAME **********

00006 HAYNES & MORGAN SEED TREAT WIREWORM & SMUT #20

****

REGISTRANT *NAME AND ADDRESS*

* 011556 CUTTER ANIMAL HEALTH LABS
DIV OF BAYNET CORP
PO BOX 390
SWANEE MISSION, KS 66201

********** PRODUCT NAME **********

00045 K R S SMEAR

****

(11678) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 101

****

REGISTRANT *NAME AND ADDRESS*

* 011678 MAKHTESHIM BEER SHEVA CHEMICAL WORKS LTD
C/O SOLCHEM INC 415 MADISON AVE
NEW YORK NY 10017

********** PRODUCT NAME **********

00016 LINDANE

****

REGISTRANT *NAME AND ADDRESS*

* 013898 CONTRACT PACKAGING INC
1505 NORTH AVENUE
NORWALK IA 50211

********** PRODUCT NAME **********

00001 SCREW-WORM EAR TICK SPRAY

****

REGISTRANT *NAME AND ADDRESS*

* 015146
Chemwood Corporation
P.O. Box 1042
Selma, Alabama 36701

********** PRODUCT NAME **********

00004 CHEMTOX-BHC

****

(15181) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 102

****

REGISTRANT *NAME AND ADDRESS*

* 015181 CASTLE & COOKE INC
130 MERCHANT ST PO BOX 2990
HONOLULU HI 96802

********** PRODUCT NAME **********

00001 TECHNICAL LINDANE 9% IMPORT

****

REGISTRANT *NAME AND ADDRESS*

* 018910 DESCWAG-BAYER HOLZSCHUTZ GMBH
C/O GEORGE GERLICZY
609 FIFTH AVE RM 701
NEW YORK, NY 10017

********** PRODUCT NAME **********

00001 XYLAMON WOOD WORM KILLER

00002 XYLAMON WOODWORM KILLING SPRAY HWS

00003 XYLAMON-LX-HARDENING

****

(19382) **** PRODUCT SEARCH LISTING ****

11/29/76 FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE PAGE 1C3

****

REGISTRANT *NAME AND ADDRESS*

* 019382 ALPHA RESEARCH CHEMICAL COMPANY
PO BOX 1502
GRAND FORKS ND 58201

********** PRODUCT NAME **********

00006 ALPHA-G

****

REGISTRANT *NAME AND ADDRESS*

* 021137 EM LABORATORIES INC
500 EXECUTIVE BLVD
ELMSFORD NY 10523

********** PRODUCT NAME **********

00003 LINDANE

****

REGISTRANT *NAME AND ADDRESS*

* 030940 QUANTEX CORPORATION THE
BOX 9158 MALLORY STATION
MEMPHIS, TN 38109

********** PRODUCT NAME **********

00003 QUANTEX-BHC

****

(33371) **** PRODUCT SEARCH LISTING **** PAGE 104

FEDERALLY REGISTERED PRODUCTS CONTAINING LINDANE

11/29/76

****

REGISTRANT *NAME AND ADDRESS*

* 033371 NO RINSE LAB
20 COMPARK RD
DAYTON, OH 45459

********** PRODUCT NAME **********

00001 KOTE GLO FLICK'N TEA SHAMPOO FOR DOGS

****

REGISTRANT *NAME AND ADDRESS*

* 033560 PRO SERVE INC
5050 POPLAR SUITE 2133
MEMPHIS, TN 38157

********** PRODUCT NAME **********

00006 STAA-CLEAR ABX

****

REGISTRANT *NAME AND ADDRESS*

* 034704 PLATTE CHEMICAL COMPANY
150 SOUTH MAIN
GFREMONT, NB 06802

********** PRODUCT NAME **********

00038 TRIPLE SEED PROTECTANT

00039 CLEAN CROP MANEB-LINDANE SEED PROTECTANT

****

(34731)

**** PRODUCT SEARCH LISTING ****

11/29/76

FEDERALLY REGISTEPED PRODUCTS CONTAINING LINDANE

PAGE 105

****

REGISTRANT *NAME AND ADDRESS*

* 034731 MEDICO INDUSTRIES INC
ELKAN ESTATES 15TH & OAK STREET
ELWOOD, KS 66024

********** PRODUCT NAME **********

00003 LIN-O-MED PET SHAMPOO

****

REGISTRANT *NAME AND ADDRESS*

* 036232 REED & CARNRICK
30 BORIGHT AVENUE
KENILWORTH, NJ 07033

********** PRODUCT NAME **********

00001 R & C SPRAY

****

REGISTRANT *NAME AND ADDRESS*

* 036988 DAY BALDWIN
1460 CHESTNUT AVENUE
HILLSIDE, NJ 07205

********** PRODUCT NAME **********

00001 GAMMA BENZENE HEXACHLORINE 1% U.S.P.

****

[FR Doc.77-4650 Filed 2-16-77;8:45 am]